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REPORT
OF THE
ROYAL COMMISSION
ON
TRANSPORTATION
Province of Ontario

1938



ONTARIO

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TORONTO

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1939

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REPORT OF THE ROYAL COMMISSION ON TRANSPORTATION

PROVINCE OF ONTARIO

TO HIS HONOUR THE LIEUTENANT-GOVERNOR IN COUNCIL.

MAY IT PLEASE YOUR HONOUR:

We, your Commissioners, appointed in pursuance of an Order-in-Council dated the 26th day of August, 1937, have conducted an inquiry into all matters pertaining to or affecting persons or corporations engaged in the business and operation of transporting freight by motor vehicles, whether for gain, or not for gain, and passengers by motor vehicle for gain in the Province of Ontario and the relation thereto of all competing forms of transport. Herein we report the results of that inquiry.

The report is prefaced, in Chapt. I, by a summary of findings, recommendations and suggestions, but only the more important aspects of the matters investigated are touched upon in the summary. Full acquaintance with the facts elicited by the inquiry and the views of the Commission with respect to them can only be gained by a careful examination of the complete text.

The sources of information and the procedure followed in the obtaining of it are indicated in Chapt. III. A list of witnesses and of public bodies, organizations, associations and individuals making written submissions only is given in Appendix A-III.

For convenience, the decimal system of designating article numbers and table numbers has been employed. The number before the decimal point indicates the chapter and the number following it indicates the serial number of the article or table within that chapter. The prefix "A" refers to the appendices.

CHAPTER I

SUMMARY OF FINDINGS, RECOMMENDATIONS AND SUGGESTIONS

1.1—General Considerations.

FINDINGS.

(1) *Importance of Commercial Motor Transport to the Province.* There can be no doubt of the profound and widespread influence that commercial motor transport has had on industrial and social conditions in Ontario. Motor trucks now serve many communities that formerly lacked direct service by rail or water. In many instances they have reduced the cost of freight transportation, have stimulated business, and by giving frequent and expeditious service to outlying areas have assisted in the decentralization of industry and the commendable building up of prosperous small communities distant from the large cities. At the same time, motor buses serve communities far removed from railway lines and those on lines having restricted passenger train movements are receiving a much more frequent service than formerly. (Art. 3.1).

There appears to be in Ontario an original investment in commercial motor vehicles of not less than \$130,000,000 and at least 120,000 persons are directly engaged in one capacity or another in connection with the operation of such vehicles. Many more persons are employed indirectly in connection with motor transport, as in garages, repair shops, gasoline stations, manufacture of equipment, or in occasional or seasonal service. Indeed, by reason of the basic influence of transportation on the cost of doing business, the whole fabric of commerce and industry in the Province is vitally affected. (Art. 3.1).

While under the Reference the Commission was not required to consider non-commercial motor transport, it is obviously impossible to dissociate it entirely from the operations of commercial vehicles. Licensing, regulations and highway costs for the two classes are interrelated. Moreover, in any consideration of the latter, the effect of the expenditure of such a sum as \$117,750,000 by tourists in Ontario during 1937 cannot be overlooked.

(2) *Appraisal of the General Problem.* Throughout the inquiry the Commission has held to the view that the most important aspect of the problem is as to whether under the existing order of things the users of transportation in Ontario are being adequately served and in a manner not inimical to the public interest.

The Commission is convinced that those forms of transport that are intrinsically most economical and most efficient for each type and length of haulage must in the end be allowed to prevail. But at the same time it holds that all transport agencies should either reimburse the general public for facilities provided by it, or, in the alternative, should receive equal aid or consideration from the public. In other words, there should be equality of opportunity and equality of obligation.

If this position be sound, there should, in the opinion of the Commission, be no governmental action calculated either to hamper or to foster any legitimate form of transport. There should be no effort to secure any "different division of function than would result if a single administration, without

divergence of financial interest, were solely occupied in meeting the needs of the public by the most convenient and economical arrangement of transport." (Art. 3.5).

(3) *Inclusion of Northern Ontario Roads.* The Commission is fully convinced that the roads of Northern Ontario should be considered as an integral part of the highway system of the Province. Motor traffic now moves over every passable road within its boundaries and it is no longer practicable to delimit arbitrarily any region within which the highway system may properly be considered as contained and in respect of which all highway revenue should be spent. Southern Ontario and Northern Ontario are vitally interrelated commercially, and the Commission is definitely of the opinion that the sectionalizing of the highway business of the Province in respect of these two divisions of it is most undesirable. (Art. 12.1).

(4) *Justification for Including the Expenditures Made by the Urban Municipalities.* In the opinion of the Commission, neither the total expenditures on the public roads of the Province nor the appropriate destination of motor vehicle revenue can be properly determined without regard to the street systems of the towns and cities. Much revenue is obtained from vehicles that rarely, if ever, leave the corporate limits of urban municipalities. Probably one-third of all motor vehicle travel in Ontario is on their streets and roads. For this reason, there does not appear to be any principle whereby the complete withholding of rebate, subsidy or aid to separated urban municipalities in the matter of their streets or of connecting links can be justified. Without in any way altering the nature or extent of the control enjoyed by the local municipalities over their own streets, it appears necessary in a just appraisal of the situation to consider all revenue in respect of the travelled ways, be they rural or urban, in relation to all expenditures made in connection with the facilities provided by the public for the earning of that revenue. (Art. 12.4).

1.2—Total Expenditures on the Public Roads of Ontario.

FINDINGS.

(1) *Total Expenditures by the Province.* The total capital expenditure made by the Province of Ontario for the fiscal years 1889 to 1938, inclusive, was \$296,722,056.83. The expenditure on maintenance and administration was \$97,593,340.85 and the total expenditure under both headings was \$394,315,397.68. Only 4.2 per cent. of this total expenditure was made prior to November 1, 1918, that is, the beginning of the fiscal year 1919. (Art. 12.2 and Table 12.1). Expenditures made before 1889 are uncertain, relatively small in amount and, for the most part, in connection with work of temporary value.

(2) *Total Expenditures by the Municipalities on Rural Roads.* For the period January 1, 1889, to March 31, 1937, the total capital expenditure made on rural roads by the municipalities was \$135,563,505.48, while for maintenance it was \$83,609,386.23. For the two combined, it was \$219,172,891.71. Of this total, 32.6 per cent. was expended prior to the fiscal year 1919. (Art. 12.3 and Table 12.3).

(3) *Total Expenditures by the Urban Municipalities.* On the basis of a study made of nine typical urban municipalities in Ontario, the Commission estimates that the total expenditure on urban streets and roads for the entire Province for the period January 1, 1889, to March 31, 1937, amounted to \$166,082,000 for construction, \$79,555,000 for maintenance, and \$245,637,000 for the two combined. Only 27.8 per cent. of this expenditure was incurred prior to the fiscal year 1919. (Art. 12.4 and Table 12.3).

(4) *Total Provincial and Municipal Expenditure on Public Roads and Streets of the Province on Capital Account.* Capital expenditures made for the period January 1, 1889, to March 31, 1937, by the various departments of the Government of Ontario for rural roads, including a relatively small amount expended on connecting links in non-separated towns and villages, amounted to \$262,544,668.29. Capital expenditures made by the municipalities for rural roads in the same period amounted to \$135,563,505.48, while on urban streets it is estimated to have been \$166,082,000. The total capital expenditure on rural roads made by all public bodies in the Province for the period mentioned was \$398,108,173.77, while for rural roads and urban streets together it was \$564,190,173.77. Only 16.4 per cent. of this total expenditure was made prior to November 1, 1918. (Art. 12.5 and Table 12.7).

(5) *Total Provincial and Municipal Expenditure on Public Roads and Streets of the Province for Maintenance and Administration.* For the period January 1, 1889, to March 31, 1937, the various departments of the provincial government spent for maintenance and administration in connection with rural roads a total of \$88,835,964.86, including a relatively small amount expended on connecting links in non-separated towns and villages. During the same period the municipalities expended for maintenance and administration on rural roads \$83,609,386.23 and for urban streets an estimated amount of \$79,555,000. The total expenditure made in respect of maintenance and administration for the period mentioned was \$172,445,351.09 for rural roads and \$252,000,351.09 for rural roads and urban streets combined. Only 25.2 per cent. of this total expenditure was incurred before the fiscal year 1919. (Art. 12.5 and Table 12.8).

(6) *Grand Total of Provincial and Municipal Expenditure on Public Roads and Streets of the Province.* For the period January 1, 1889, to March 31, 1937, the total amount expended on the construction of public roads and streets in the Province was \$564,190,173.77. On maintenance and administration it was \$252,000,351.09. For the two combined it amounted to \$816,190,524.86. Only 19.1 per cent. of the latter amount was spent prior to the fiscal year 1919. (Art. 12.5 and Table 12.9).

(7) *Relation of Total Expenditure to Total Revenue.* While during the past ten fiscal years the total annual revenue has amounted to about 84 per cent. of the total annual expenditure by the Province on a cash basis, no retirement of previous capital expenditure has been possible from revenue on this basis, nor have revenues been available to meet interest on the debt occasioned thereby. (Art. 12.7, Table 12.15 and Fig. 5).

1.3—Highway Debt of Ontario.

FINDINGS.

(1) *Relation to Annual Costs.* Obviously, no estimate of the annual costs of the highways can be complete within inclusion of the carrying charges on the existing highway debt.

(2) *Basis of Computation of the Highway Debt.* Since no part of the public debt of the Province is specifically earmarked as highway debt, the latter can only be estimated. Published statements representing the investments of the provincial debt in revenue-producing but not realizable assets in the form of roads and highways do not indicate actual debt, but merely the capital expenditures on the roads and highways for the periods comprised. In the opinion of the Commission, the only procedure by which an adequate conception of the highway debt can now be built up is to consider the relation

of highway revenues to net expenditures, taking full account of the interest factor in establishing such relation.

The municipal debt in respect of roads and streets is not known and the Commission could obtain no reliable information concerning it, apart from the \$15,526,327 stated to be owing by the counties for county roads and King's Highways, as of December 31, 1933.

The concept upon which the Commission has estimated the highway debt is that all excess revenue above net ordinary expenditure and interest requirements is invested as a sinking fund accumulation in the securities issued to provide funds for capital expenditures and that interest accruing on such investment is reinvested in the same way. Correspondingly, all deficiencies between revenue and the net ordinary expenditure and interest requirements are assumed to be made up by borrowing, the interest payable on such overdrafts or loans being added to the obligation.

Having regard to the effective rate now being paid on all Ontario Government issues and likely to be paid for some time in the future, the Commission has adopted an interest rate of $4\frac{1}{2}$ per cent. (Art. 12.10).

(3) *Estimated Highway Debt, 1919-1938.* Since the intensive use of motor vehicles and the accompanying extension of highway building programmes began at the close of the war, the Commission is of the opinion that the most reasonable date from which to consider the highway debt of the Province as accumulating is November 1, 1918, that is, the beginning of the fiscal year 1919. Proceeding on the basis outlined in (2) above, the estimated net provincial highway debt as of March 31, 1938, is \$212,691,010.28. (Art. 12.10 and Tables 12.11 and 12.14).

(4) *Estimated Highway Debt, 1915-1938.* Since the motor vehicle licence fees were raised to a revenue basis in the year 1915, there may be justification for beginning debt accumulation on November 1, 1914. On this basis the debt as of March 31, 1938, would be \$219,281,119.69. (Art. 12.10 and Tables 12.12 and 12.14).

(5) *Estimated Highway Debt, 1903-1938.* Having regard to the acceleration of effort in highway building following the passing of the Highway Improvement Act of 1901, and the revolutionary changes that flowed from the introduction of the motor vehicle, debt calculation might with some justification begin with the year 1903. In that year money was first expended by the Government under its new road policy, motor vehicles were for the first time licensed and a revenue obtained from them. Beginning the accumulation on January 1, 1903, the debt at March 31, 1938, would amount to \$249,230,617.15. (Art. 12.10 and Tables 12.13 and 12.14).

SUGGESTION.

(1) Since the highway debt as estimated in (3), (4) or (5) above is not greatly different from one-third of the total funded and unfunded debt of the Province reported as of March 31, 1938, it might be found convenient, and would probably overcome many difficulties, if the Department of Highways were charged with one-third of the outstanding debt of the Province as of a stipulated date, this charge carrying with it the obligation to supply out of highway revenues one-third of all sums needed for interest payments and retirements of the provincial debenture issues and floating debt at that date. Such procedure would obviate all controversy as to what rate of interest might at any time be fair. (Art. 12.14). From that date forward the highways would be charged with the specific amount of each debenture issue made that would represent monies required for highway purposes in excess of revenue.

1.4—Annual Cost of the Highways.

FINDINGS.

(1) *Basis of Annual Cost Determination.* Determination of the annual cost of the highways can only be made if the expenditure is considered in relation to the plan of financing followed at the present time or to such other plan as may conceivably be adopted in the near future. The Commission has estimated the annual cost on two bases, namely, (a) the deferred-payment plan and (b) the pay-as-you-go plan. The first of these is the plan now being followed, although indirectly, since the highway debt has up to the present not been definitely indicated. The second is the plan recommended by the Commission for future gauging of the required highway revenue.

(2) *Conditions Assumed in Applying the Deferred-Payment Plan.* Debts incurred in respect of highway expenditure should obviously be amortized over a definite and reasonable period. The borrowing of money for roads without intent ever to retire it, on the ground that the life of the roads is perpetual, is as unthinkable as it is impossible. It is inherent in a constantly growing system of any character financed on the deferred-payment plan that annual debt charges increase year by year, during the period of amortization at least. To meet them requires constantly increasing annual revenues and once the increasing trend of revenue is interfered with the whole basis of the accounting is undermined. While the Commission sees no present indication that motor vehicle revenue and the use of motor vehicles will not continue to increase indefinitely, it believes that it is most unwise to base any system of provincial highway financing on such an assumption. The possibility of static or reduced highway revenue through changed conditions in our manner of living and doing business must be envisaged.

In proceeding according to the deferred-payment plan the assumption was made that interest is paid at $4\frac{1}{2}$ per cent. on the unamortized balance and that capital expenditure is amortized over a period of 30 years on the sinking fund basis, also at $4\frac{1}{2}$ per cent.

By reason of insufficient experience in the Province concerning the useful life of many classes of highway property and the impracticability of conducting the detailed and lengthy examination of all the physical property involved and the records respecting it, the method of depreciation is not deemed to be practicable. (Art. 12.11).

(3) *Annual Cost of the Highways to the Province and Its Relation to Revenue According to the Deferred-Payment Plan.* Considering the inauguration of the present highway system as at the beginning of the fiscal year 1919, and assuming that all money for construction was borrowed at $4\frac{1}{2}$ per cent. on thirty-year sinking fund debentures, and that sinking funds were invested in the debentures against which they were reserved, the revenue has exceeded the total cost of interest, amortization instalment and maintenance and administration of the roads for twelve out of the twenty fiscal years comprised in the period 1919-1938. (Fig. 6). For the years 1928 to 1938, inclusive, the average annual cost on this basis has been about \$17,300,000 and the average annual revenue about \$20,090,000. Of the total annual cost, 47 per cent. is in the form of interest. (Tables 12.10, 12.16 and Art. 12.12). On the other hand, by proceeding in accordance with this plan a net provincial debt in respect of highways amounting to \$212,691,010 has been built up. If accumulation of debt started as of January 1, 1903, the amount of it at March 31, 1938, would be \$249,230,617.

Adopting \$17,000,000 as the minimum practicable annual capital expendi-

ture, and as representing the general average capital expenditure per fiscal year for the period 1928-38, and projecting this forward, a gross debt of \$510,000,000 would be reached about the year 1970. Sinking fund accumulations, assumed as having begun in 1919, would amount to \$192,000,000 and the net debt to \$318,000,000, thereafter remaining fixed at this amount while the above-mentioned annual new capital expenditure continued and requiring, at $4\frac{1}{2}$ per cent., a continuing annual interest payment of \$14,310,000. If the interest rate were 3 per cent., the capital investment would still build up to \$510,000,000, the sinking fund would stabilize at \$209,340,000 and the annual interest requirement would be \$9,019,800 forever. (Arts. 12.12, 12.13 and Fig. 6).

(4) *Pay-as-you-go Plan.* In view of the heavy accrual of debt that follows in the train of the deferred-payment plan, the Commission has investigated carefully the merits of the pay-as-you-go plan. Assuming the future annual capital expenditure to be \$17,000,000 with annual maintenance amounting to 3 per cent. of the gross investment in the roads, there would be no interest on new debt to be paid, but, at $4\frac{1}{2}$ per cent., annual instalments of \$11,558,300 would need to be paid to retire the present debt of \$212,691,010 in forty years. In order that this plan might be pursued, it would be necessary to obtain approximately \$9,000,000 more annual revenue than is now being obtained. The only alternative would be reduced annual capital expenditures. In the year 1979, however, the Province would be free of road debt, as compared with a net debt of \$318,000,000 if it were financed on a thirty-year sinking fund plan. (Art. 12.15 and Fig. 7).

(5) *Annual Cost of Roads to the Municipalities.* The Commission could obtain only fragmentary information as to the total municipal debt for roads and hence the full annual cost in respect of them, inclusive of debt charges, cannot be determined. During the eighteen years and five months from November 1, 1918, to March 31, 1937, the average annual expenditure made by the municipalities for the construction and maintenance of rural roads was \$8,020,000; for urban streets it was \$9,636,000; and for the two combined, \$17,656,000. (Arts. 8.2, 12.16 and Tables 12.7 and 12.8).

RECOMMENDATION.

(1) In view of the obvious advantage of avoiding the continual growth of highway debt under the deferred-payment plan, the Commission recommends that at as early a date as practicable the Province adopt the pay-as-you-go plan with respect to highway expenditures. Nevertheless, irrespective of the plan of financing that may be adopted or the interest rate that may ultimately be attained, the Commission strongly urges that not less than \$10,000,000 be set aside annually from highway revenue to take care of existing highway debt until repaid.

1.5—Subsidy of Motor Vehicle Operation.

FINDINGS.

(1) *No Direct Subsidy.* No instances of direct subsidy to motor vehicle operation in Ontario were disclosed. (Art. 8.1).

(2) *Virtual Subsidy of Motor Transport.* From November 1, 1918, to March 31, 1938, the total expenditure made by the Province on highways for construction exceeded the highway revenue available after meeting maintenance and administration by \$121,957,458.58. The interest on this, which at $4\frac{1}{2}$ per cent. amounts to \$5,488,085.61, represents a virtual annual subsidy to the motor users of the Province who, if they were financing the highway system themselves, would have to pay it.

Since the municipal debt for highways is not known, the virtual subsidy by the municipalities had to be appraised in another way. From November 1, 1918, to March 31, 1938, the average annual expenditure by the rural and urban municipalities was \$17,656,000, or an average over the period of \$5.44 per capita per annum. This is nearly double the \$3.00 estimated as the minimum demanded by social necessity. On this basis, the virtual capital subsidy to motor vehicles for the period amounts to \$146,000,000, which, at 5 per cent., would represent an annual interest saving to the motor users of \$7,300,000.

The combined virtual annual subsidy granted by the Province and the municipalities to motor vehicles is therefore approximately \$12,800,000. It is not possible to determine the portion of this that is applicable to commercial vehicles, since the relative amounts of motor fuel tax paid by the various classes of vehicles is not known. (Art. 8.2).

1.6—Subsidies to Other Forms of Transport than Motor Transport.

FINDINGS.

(1) *Subsidies to the Railways in Ontario.* Up to the present, the subsidies to the railways in Ontario have amounted in cash to \$54,216,938 and in transferred railway property to some \$16,000,000. Land grants amounted to 3,470,709 acres, which at the conventional valuation of \$1.00 per acre, would add another \$3,470,709. On this basis the total capital subsidies received by the steam railways in the Province would amount to \$73,687,647. The investment of the Province in the Temiskaming and Northern Ontario Railway is specially considered in Art. 8.3.

Adopting the average interest rate of 5 per cent. paid by the two largest railways on securities not enjoying governmental guarantee, the annual saving of interest to the railways is \$3,684,382.

Since the amount of railway borrowing necessitated in respect of railway property in Ontario was probably not more than that incurred in connection with the public roads and streets of the Province, and since the highway users have profited from the fact that provincial securities carry a lesser interest rate than would have been available to private borrowers, the Commission is of the opinion that the advantage of the guarantee of railway securities is offset by the favourable financing made possible for at least that part of the highway debt incurred by the Province and the financially stable municipalities. (Art. 8.3).

(2) *Ratio of Subsidy to Annual Maintenance of Way and Structures.* Up to December 31, 1936, the steam railways of Canada had received in cash, in the cost of lines turned over, and in all other forms save land grants, subsidies amounting to \$218,977,196. In addition, grants of 47,639,866 acres of land were made which, at \$1.00 per acre, amounted to an additional \$47,639,866. On the total amount of \$266,617,062, the annual interest saving would be \$13,330,853. For the calendar year 1936 the total amount expended by the railways of Canada for maintenance of way and structures was \$60,378,274.88, and consequently the interest saving to the railways because of direct subsidies received is 22.1 per cent. of their annual expenditure for maintenance of way and structures. (Art. 8.3).

(3) *Comparison of Subsidies to the Railways With Virtual Subsidies to Motor Vehicles.* As stated above the annual interest saving to the railways by reason of direct subsidies is \$3,684,382. The corresponding interest saving to the highway users by reason of virtual subsidy is \$12,800,000, or approximately three and one-half times as much.

If the ratio which the annual value of the subsidies to the railways of Canada bears to the annual cost of maintenance of way and structures be applied to the average annual cost of maintenance and administration of rural roads and urban streets in Ontario from November 1, 1918, to March 31, 1937, the motor users would be entitled, if the treatment were no more favourable than that accorded the railways in respect of direct subsidies, to an annual virtual subsidy of 22.1 per cent. of \$10,200,000, or \$2,250,000 instead of the estimated \$12,800,000. On this basis, the motor users would appear to enjoy treatment nearly six times more favourable than that enjoyed by the railways, in so far as the free use of capital invested in the provided facilities is concerned. (Arts. 8.2 and 8.3).

The amount which the taxpayers of Ontario have contributed to meet railway deficits in the Province is undeterminable but manifestly very great. Whatever this may be, it has been incurred to a considerable extent through the provision at public expense of facilities that have made it possible for other forms of transport to supplant the railways in certain important classes of business. (Art. 8.3).

(4) *Subsidies to Water Transport.* No direct subsidies are granted to water transport in Ontario. Virtual subsidy exists to an indeterminable degree through the provision and maintenance by the Government of Canada of the waterways, canals and harbours and through freedom from canal fees, save for linesmen's fees on the Welland Ship Canal. (Art. 8.4).

(5) *Subsidies to Air Transport.* Up to March 31, 1937, the Dominion Government had spent \$2,084,810.28 on airports in Ontario. Information respecting provincial and municipal expenditures on airports in the Province is available only up to the end of 1931, when it amounted to \$836,129.49. (Art. 8.5).

1.7—Division of the Cost of the Highways Between the General Public and the Motor Vehicle User.

FINDINGS.

(1) *General Basis.* Ascertained annual highway costs should be divided in some equitable ratio between the general public and the motor vehicle users. That portion assigned to the motor users should be further allocated amongst the different classes of motor vehicles according to some principle or combination of principles.

(2) *Social-Necessity Value of Roads.* That part of the annual highway costs properly borne by the general taxpayer is, in this report, designated the "social-necessity value" of the roads. It represents the combined interest of all the members of the affected community in the provision and maintenance of highways, in so far as comfort and convenience of living and the general social well-being of the community are concerned.

Expenditures incurred primarily for commercial and economic purposes are not elements of social-necessity value. Commerce is essentially ramifying and no transaction of it can be said to have local significance only. Since such expenditures are in large measure for the general benefit of the state, they should be widely, and not locally, borne. (Art. 13.1).

With the coming of the motor car, a universal demand has sprung up for roads of a character altogether inconsistent with local uses and in which the social-necessity value is obscured or overlapped by expenditures incurred for a quite different object.

Nevertheless, in spite of the onset of the motor vehicle, the requirements

of basic social necessity persist with but little modification. These should, by reason of their essential nature, be borne by the local communities. In consequence, the term "social-necessity value" has, in this report, been limited to the necessities of the community with respect to roads, apart altogether from their use by motor vehicles in other than the most elemental and most local way. (Arts. 13.3, 13.4).

The cost of satisfying the social-necessity demand is represented by a more or less fixed amount of money or human labour per capita of the local community. It does not vary greatly from year to year or from place to place within a common culture and is very nearly the same for densely populated and sparsely populated communities.

Studies of all available data carried out by the Commission lead it to believe that a fair range of the social-necessity value of roads and streets in Ontario, without regard to motor vehicles, would be between \$2.00 and \$3.00 per capita per annum. The value tends to be somewhat higher for rural than for urban communities. (Appendix A-XIII).

For simplicity, and in order that the motor vehicle may not be asked to pay more than its fair share of the cost of the roads, the social-necessity value has, in allocation calculations, been uniformly assumed at \$3.00 per capita per annum. This amount will include whatever obligation may rest on the general taxpayer to promote the tourist traffic.

SUGGESTIONS.

(1) *Dealing With the Social-Necessity Problem.* As a means of ensuring a division of annual cost of the public roads in accordance with the principles outlined above, the Commission would suggest the following measures for dealing initially with the problem. (Art. 13.7).

(a) The Department of Highways would continue to assume complete control and responsibility for King's Highways and provincial secondary roads.

(b) In equity, the Department would assume the cost, or a share of the cost, in proportion to the jurisdiction exercised, of the construction and maintenance of connecting links through cities and separated towns, as well as through non-separated towns and villages.

(c) The Department would not only continue to grant subsidies to townships and counties toward the cost of road construction and maintenance done in conformity with an annual programme of work approved by it, but would extend the principle to cities and separated towns at as early a date as practicable.

(d) In view of the more highly organized administrative machinery of cities, it would seem more convenient to grant each city a specific subsidy determined each year, based on an agreed amount per capita or otherwise, than to have a specific list of road work approved annually to the cost of which the Department would contribute. The annual subsidy would be expended by the city on traffic relief routes, whether these were classified as provincial highways or not.

(e) As a result of the assumption by the Province of 100 per cent. of the cost of the King's Highways and secondary roads, it is possible that all, or a majority of, the main arteries of travel in a municipality might become King's Highways, or provincial secondary roads, while the social-necessity needs of the local municipality continued to be served by

them, without need of other roads. In these circumstances it appears proper to the Commission that if the full quota for social-necessity obligation could not be properly spent on roads continuing under the jurisdiction of the local municipality, or in which it had an interest, the balance of the quota should be payable to the Province in consideration of the social-necessity use made of the King's Highway and provincial secondary roads within the municipality. If there were no King's Highways, secondary roads or connecting links within such municipality, this provision would naturally not apply.

Deductions from any subsidy payable by the Province to a municipality would be made to the extent that the annual net amount that would be expended by such municipality on account of roads, if such subsidy were to be paid in full, fell short of its social-necessity quota.

(f) The social-necessity quota, or the minimum amount that must be expended annually on roads by every municipality within the Province out of non-motor revenue for local social needs, is, upon the basis of the tentative studies of the Commission, approximately \$3.00 per capita. The Commission believes that in practice, the actual quota could be arbitrarily set from time to time by the Government at a figure not greatly differing from the amount mentioned.

1.8—Allocation of the Motor Vehicle Share of Annual Costs Amongst the Various Classes of Motor Vehicles.

FINDINGS.

(1) *Many Factors Affect Allocation.* The Commission carefully explored all of the commonly employed bases of allocation of highway costs amongst the various classes of motor vehicles using the highways and cannot endorse any of them without qualification. So many factors require to be considered and given due weight that a strictly scientific and precise basis of cost allocation has so far not been established.

The circumstances that require to be considered in any attempt to arrive at a proper basis are as follows:

(a) *Vehicle-Miles.* Certain privileges and conveniences are enjoyed for every mile operated by all vehicles alike, regardless of weight, size or speed. Such would be the right-of-way, fencing, grading, drainage, road signs and signals. (Art. 13.9).

(b) *Road Occupancy.* The moving tenancy of the highways enjoyed by vehicles should in some measure be proportionate to the volume, slowness of travel and annual mileage of the latter. (Art. 13.10).

(c) *Vehicle Width.* Vehicles of a width greater than normal appear to be responsible for about 60 per cent. of the width of pavement requirement in addition to that necessary for ordinary passenger motor cars, and light trucks moving at the same operating factor of safety as the wider vehicles. (Art. 13.10).

(d) *Vehicle Weight.* Where a pavement or surfacing rests on a completely stabilized foundation, considerations of vehicle weight alone would lead to allocating about 45 per cent. of the total annual expenditure for construction, maintenance and administration in proportion to the square root of the maximum wheel load. (Art. 13.11).

(e) *Ton-Miles.* This commonly employed standard for the measurement of road use does not cover the relative demands of heavy and light vehicles on the pavement, since a heavy total tonnage may be moved by means of light vehicles. (Art. 13.12).

(f) *Number of Vehicles in a Class.* What might appear to be an equitable method of allocation if there were the same number of vehicles in each class may entail an altogether impracticable assessment on individual vehicles in a small class.

SUGGESTION.

(1) *Adopted Basis of Cost Allocation.* After giving close study to all of the factors involved and attaching such weight to each as seemed proper in the circumstances, the Commission is convinced that, under present circumstances in Ontario, the cost of construction and maintenance of the highways of the Province is increased by approximately seven per cent. by reason of the presence of vehicles that are heavier and wider than ordinary passenger cars and light trucks.

On this basis there should be collected in licence fees from the heavier and wider vehicles an amount equal to the normal or basic fee, plus nearly seven per cent. of the total annual highway revenue required, including motor fuel tax. (Art. 13.14).

1.9—Licensing of Commercial Motor Vehicles.

FINDINGS.

(1) *Application of Highway Revenues.* When identification of the motor vehicle was the sole object of registration, the licence fees were nominal and designed to cover at most the cost of licence plates and the administrative charges of the licence office. With the year 1915, however, these fees were definitely placed on a revenue basis, so that whatever was received in excess of administrative costs might be devoted to construction and maintenance of the highways.

While it appears from the Highway Improvement Act that all provincial revenues derived from motor vehicles were to be earmarked for highway improvements, in actual practice highway revenues have never been deemed other than general revenue available to meet the general expenses of the Province. Despite this, the motor vehicle users have not suffered by the procedure, for since the first revenues were collected in 1903 the Province has expended \$133,353,871 more on the highways than it has received from the users of them and by reason of this excess expenditure has incurred a highway debt amounting to \$249,230,617. (Art. 7.4).

(2) *Present Basis of Motor Vehicle Licensing.* Present licence fees are based on the type and gross weight of vehicle, thus taking account of possible additional demands upon the highway arising from vehicles of heavy weight. The higher fees required of vehicles not equipped with pneumatic tires are obviously directed to the same object. Additional fees demanded of vehicles not propelled by gasoline are for the purpose of compensating the Government for the loss in fuel tax revenue.

(3) *Licensing of Common Carrier Operations.* With a view to extending public control over commercial vehicles, an applicant for a licence for either a public vehicle or a public commercial vehicle is now required, as a prerequisite, to obtain from the Ontario Municipal Board a certificate of public necessity and convenience. As a result of this policy, relative stability has been brought about in the number of public vehicle licences, but those for public commercial vehicles have increased markedly in recent years. The evidence indicated that too many licences had been issued to such vehicles. (Art. 7.16).

1.10—Proposed Classification of Commercial Freight Vehicles.

RECOMMENDATIONS.

(1) *Proposed Transport Vehicle Class.* In view of the common use of the ordinary passenger car for business or professional purposes, the Commission would recommend that the historic but artificial distinction in the basis of licensing passenger vehicles and commercial vehicles be dropped. It recommends that all commercial vehicles in excess of 6000 pounds gross weight, that is, substantially above the weight of normal automobiles, be included in a new classification termed "transport vehicles." Such vehicles should be restricted in their movements to a local zone unless specially licensed to go beyond it. There appears to be no necessity of limiting the movements of light trucks, since the utilization of a vehicle of less than 6000 pounds gross weight on long distance hauls would not be economical. (Art. 7.21).

(2) *Proposed Changes in Classification of Public Commercial Vehicles.* The Commission recommends that the following classes of public commercial vehicles be established. (Art. 7.22) :

(a) Class "A" Common Carrier. It is recommended that the present Classes "A" and "B" be merged into one group hereinafter to be designated as "Class 'A' Common Carriers". The services provided by these carriers would be a scheduled service essentially limited in practice to package freight and to higher grade products.

(b) Class "C" Contract Carriers. It is recommended that the present Class "C" and Class "D" carriers be merged to form a group to be designated "Class 'C' Contract Carriers". Operations under Class "C" licence would comprise the conveyance of one person's goods only to or from the home terminal of the licensee and vehicles so licensed would be limited to the haulage of higher grade freight in package form in quantity and whether on a casual trip or on charter or contract service. It is recommended that the Class "A" licences normally include Class "C" privileges.

(c) Class "E". It is recommended that Class "E" remain as at present, operations under this group being limited to the carriage of milk and cream and empty milk and cream cans.

(d) Class "F". It is recommended that Class "F" remain as at present, vehicles licensed under this classification to be reserved for the transport of livestock, road construction materials, bricks, cement blocks, coal and rough lumber.

(e) Class "G". It is recommended that a Class "G" be established to take the place of the special vehicle subdivision of the present Class "D". Vehicles under this class would be specially designed or intended and used only for the carriage of one type of product, such as new motor cars, or other vehicles or implements, boilers or heavy machinery, individual animals, tank cars for liquids, *etc.*, but excluding vehicles licensed in "E" or "H" classes.

(f) Class "H". It is recommended that Class "H" remain as at present, but that in addition to enjoying the privilege of conveying used uncrated household goods, furniture and fixtures they be entitled to include new furniture and fixtures when set up and uncrated ready for sale or use.

1.11—Through Routing of Semi-Trailers.

RECOMMENDATION.

Having in mind the relatively great expense entailed in loading and unloading, compared with the actual hauling of goods, the Commission believes that through routing of trailers should be encouraged. Such would introduce a considerable saving when the points of origin and destination of loads are in the territory assigned to different public commercial vehicle operators. Restricted control would, of course, be necessary in order to guard against opening the door to renewed competition and to protect the owners of equipment transferred to other operators. Accordingly, the Commission recommends that through routing of equipment be limited to semi-trailers only, that the right to haul such through-routed trailers be restricted to Class "A" operators, that it apply only within the zone comprised by the Class "A" licence involved and only in respect of the operators' own tractors operated by their own employees.

1.12—Taxes Imposed on Motor Transport.

FINDINGS.

(1) *The Motor Fuel Tax.* For some years past the motor fuel tax has represented considerably more than one-half of the revenue derived from motor vehicle operations. Most of it is collected from the sale of gasoline, although increasing sums are derived from fuel oil used for Diesel engine equipment. (Fig. 4).

A survey of the present rate of taxation on motor fuel indicates that for the Provinces of Ontario and Quebec it is six cents per gallon, for Alberta, British Columbia, Manitoba and Saskatchewan it is seven cents, while for New Brunswick, Nova Scotia and Prince Edward Island it is ten cents. In Great Britain the tax is eighteen cents per gallon. (Art. 7.9).

(2) *Other Taxes Borne by Motor Transport.* Public vehicles are required to pay a seat tax of one-twentieth of one cent per seat-mile for vehicles operating on certain highways and one-thirtieth of one cent per seat-mile for vehicles operating on certain other highways. (Art. 7.8).

All motor transport companies are liable to realty tax, municipal business tax, provincial corporation tax, and dominion and provincial income tax. An analysis of the operations of seven representative public commercial vehicle operators revealed the fact that motor fuel tax and licence fee averaged 8.79 per cent. of the gross revenue, while all normal general purpose taxes averaged 0.99 per cent. (Art. 7.10).

For the six major public vehicle licensees in the Province of Ontario, representing a preponderance of all public vehicles licensed, miscellaneous taxes of every character, other than "highway taxes," amounted, in 1936, to 1.14 per cent. of the gross revenue of the six companies mentioned. Motor fuel tax, seat tax and licence fees for those public vehicle operators amounted to 9.59 per cent. of the gross revenue. (Art. 7.10).

1.13—Taxes Paid by Other Forms of Transport Than Motor Transport.

FINDINGS.

(1) *Taxes Paid by the Railways.* Expressing taxes as a ratio of gross revenue, the Canadian National Railways paid 2.67 per cent. in 1936 and the Canadian Pacific Railway 3.12 per cent., these figures being for all of Canada. No comparable figures are available for Ontario, since the railway accounts are

not set up by Provinces. Total taxes paid in Ontario by the Canadian railways in 1936 amounted to \$3,167,376. (Art. 7.11).

(2) *Taxes Paid by Water and Air Transport.* No figures were submitted or could be deduced covering the taxes paid by steamship or air transport.

1.14—Proposed Changes in Present Imposts on Motor Transport.

FINDINGS.

(1) *Unfair Results of the Present P.C.V. Licence System.* The Commission is convinced that the complaints of the public commercial vehicle operators, and particularly of those with Class "A" licences, that they should not be charged fees very much in excess of those paid by private carriers is justified. No regulations with respect of the filing of tariffs and the policing of them having been promulgated, there has been no reason for the inclusion of any sum in the licence fee for public commercial vehicles to cover this service. Moreover, the great disparity between the fees required of public commercial vehicles and of freight vehicles not operating for hire places the public commercial vehicle operators under the constant fear of losing their business through the customer placing his own trucks on the road, for which he would pay lower licence fees. (Art. 7.15). Further, the obligation of common carriers to provide service offsets to a very large extent the value of the special privileges that they may enjoy.

(2) *Objections to Present Imposts on Public Vehicles.* The chief cause of complaint of public vehicle operators related to the licence fees and the seat-mile tax that they are called upon to pay. From an analysis of the situation made by the Commission, it appears that, either on a gross ton-mile or a per passenger basis, the total imposts on the motor coach are not materially out of line with those levied on other users of the highways. A possible ground for complaint exists, however, by reason of their being called upon to pay a special mileage tax peculiar to their operations. (Art. 7.17).

(3) *Basis of Motor Vehicle Taxation.* The satisfactory nature of the motor fuel tax with respect to the receipts therefrom, the ease of its collection and the relative ease of payment by the purchaser; the fact that gallonage of fuel used by a vehicle of a given class is proportionate to the vehicle-miles operated; the fact that the larger fuel consumption per mile for the heavier vehicles automatically compensates in part for the demands of the maximum wheel load on the roadway; the fact that some 93 per cent. of the cost of the highways is occasioned by vehicles no heavier or wider than ordinary passenger cars and light trucks; and the further fact of the general acceptance of the motor fuel tax by the motor vehicle public as being in payment for the roads provided, all lead the Commission to recommend it as the basic source of revenue for highways. Adjustments for differences in gross weight and in the demand on the resistance of the pavement may be made in the relative licence fees charged.

The Commission believes that the annual licence fees should be based on the gross weight of the vehicle, since this is one consideration not fully provided for in adopting the fuel tax as the basic tax on motor vehicle operations. It accepts in principle the contention that heavy vehicles should pay more in proportion to their weight than do lighter vehicles, for reasons set out fully in the body of the report. (Arts. 7.14 and 7.18).

(4) *Additional Revenue Necessary.* In order that the provincial debt for roads may be assumed by motor vehicles, as has been recommended elsewhere, and the interest charges on it be met until the debt is paid, while at the same time maintaining a progressive programme of road construction, a motor vehicle

revenue of nine million dollars per year in excess of that latterly obtained is required.

RECOMMENDATIONS.

(1) *Increase in the Motor Fuel Tax.* The Commission recommends that the tax on gasoline and other internal combustion engine fuels used interchangeably with gasoline be nine cents per Imperial gallon; and that on fuel oil and all similar liquids used as fuel by motor vehicles the tax be thirteen cents per Imperial gallon.

(2) *Changes in Vehicle Licence Fees.* The Commission recommends that licence fees be based on gross weight and that as the gross weight of the vehicle increases the licence fee be increased in greater ratio. As set out in Table 7.3, contained in the body of the report, the normal fee for both freight and passenger vehicles would range from \$2 for a vehicle of 2000 pounds gross weight to \$8 for a 4000-pound vehicle; to \$18 for a 6000-pound vehicle; to \$50 for a 10,000-pound vehicle; to \$200 for a 20,000-pound vehicle; and to \$450 for a 30,000-pound vehicle. The fees for trailers would be the same as for motor vehicles.

Vehicles with other than pneumatic tires and those propelled otherwise than by fuel subject to the Gasoline Tax Act would be required to pay additional amounts.

Private commercial motor vehicles of gross weight in excess of 6000 pounds (transport vehicles) operated outside a zone extending 25 miles beyond the limits of their home municipality would be required to pay a fee of \$20 for each motor vehicle or trailer so registered.

It is recommended that the seat mileage tax at present levied on public vehicles be abolished.

From all public commercial vehicles, whether they be motor vehicles or trailers, or used on the highway, or for delivery, an annual registration fee of \$10 would be required, while for public vehicles the proposed fee is \$20.

(3) *Probable Effect of Changes in Motor Vehicle Imposts.* The proposed licence fees are designed to yield a revenue approximately equivalent to that produced by the fees now in force, while at the same time equalizing the burdens on public vehicles and public commercial vehicles as compared with those of private operators. Moreover, the disparity in fees required from motor vehicles and trailers would be removed.

It is not believed that an increase in the tax on motor fuel would produce any more adverse effect than a small and temporary diminution in the rate of increase in fuel consumption.

1.15—Hours, Wages and Benefits in Other Forms of Transport Than Motor Transport.

FINDINGS.

(1) *Railway Transport.* In the railway service, the 8-hr. day and the 48-hr. week are standard, except for the shop trades. Passenger train crews work on an average from 7 to 8 hrs., while freight train crews average from 9 to 10 hrs. In the freight service, however, there are a substantial number of men on duty for periods of 13 to 14 hrs. and in some cases even as long as 20 hrs.

On the basis of a 60-hr. week, which is observed by many motor transport operators, railway engineers would earn approximately from \$46 to \$51. Pas-

senger baggagemen would earn about \$36, passenger brakemen about \$35, and freight brakeman about \$36. To this amount should be added the dollar value of the substantial benefits other than actual pay derived in the railway service, although this could not be definitely evaluated by those giving evidence for the railways.

In transportation and station service, where the normal day is of 8 hrs., the pay adjusted to a 60-hr. week would amount to about \$30 for porters and truckers, \$34 for baggage, parcel-room and station attendants and \$39 for freight checkers. (Art. 6.11).

(2) *Railway Express Service.* In the railway express service, which is based on a normal 8-hr. day, the pay of vehiclemen or truck drivers would, on the basis of a 60-hr. week, amount to from \$31 to \$35, approximately. Vehicle helpers would receive about \$29. To this, again, should be added the value of the special benefits received. (Art. 6.12).

(3) *Marine Transport.* In marine transport, assuming the standard day to be of 12 hrs., the pay of second mates for a 60-hr. week would ordinarily range from \$24 to \$27, approximately; of third engineers from \$25 to \$27; of wheelmen and oilers, from \$16 to \$22; and of sailors or deckhands from \$14 to \$16. In these cases, the value of the free board has been included at one dollar per day. (Art. 6.13).

(4) *Air Transport.* In the air service the pay of an air engineer or aircraft mechanic is about \$115 per month; of an air engineer helper or aircraft mechanic helper, \$80; for chauffeurs, firemen and servicemen, \$80. (Art. 6.14).

1.16—Hours, Wages and Benefits in Motor Transport Compared With Those in Other Forms of Transport.

FINDINGS.

(1) *Causes of Long Hours and Low Wages in Motor Transport.* Irregular hours are inherent in the transport industry and occasions will arise when men must remain on duty for longer periods than are prescribed in the normal operating schedules. One of the chief factors permitting motor truck transport to compete successfully with the railways is the meeting of the wishes of the shipping public by accepting freight at almost any time and making deliveries at the earliest possible moment. The Commission does not believe that it is expedient to deprive the shipper of this class of service or the trucker from providing it, although the attendant circumstances undoubtedly add to the difficulty of maintaining reasonable hours of service for motor trucking employees. (Art. 6.1).

While giving full recognition to the need for allowing some latitude in the matter of working hours in the motor trucking industry, the Commission finds that in many instances men have been asked or permitted to remain on duty for excessively long periods. In many cases wages have been out of proportion to the hours worked or to the responsibility of the driver for either the safety of the public or the value of the equipment and cargo in his care. On the other hand, both in public commercial vehicle operations and in private trucking, many instances of fair and reasonable treatment were found, even in spite of adverse financial circumstances. (Art. 6.2).

Long hours and low wages in the motor trucking industry in Ontario have arisen from the overcrowding of the field by licensed operators, resulting in uneconomic competition for the available business; from the overstocking of the labour market, with inevitable competition for employment at almost any

wages; and from the lure of a new industry that can be entered upon with a minimum of capital and no specialized training or skill—an industry which to the man in the street, unacquainted with other than the most elementary aspects of the transport business, appears to be a very profitable one. Moreover, the compelling urge to be constantly on the move gives to the driving of a truck a greater appeal irrespective of hours than does work on a farm or in a factory. (Art. 6.3).

The economic range of the truck has a particular relationship to the hours that the driver is able to drive and the time within which a return trip can be accomplished. Having regard to the monetary urge for operators to work their drivers up to the limit of their physical ability, and the more pardonable urge on the part of the men to earn as much as possible in the only way immediately open to them to do so, it is not surprising that working hours readily tend to become unduly long. (Art. 6.3).

A circumstance tending to long hours is the desire of drivers on "turn-around" runs to return to their home terminal at night or after a moderate amount of rest. Due to the frequent need of waiting for a cargo at the far terminal, a "badly split" day may result, involving eight or ten hours of driving in a spread of ten to thirteen hours. Where the driver is operating on a trip basis he may be held up a long time at his own expense due to breakdowns or to the necessity of waiting for the arrival of a connecting transport. (Art. 6.3).

In for-hire operations long hours and low wages were found by the Commission to follow in the wake of low haulage rates. Thus, many more examples of unsatisfactory working conditions for employees were found for Eastern Ontario, where rates are relatively low, than for Western Ontario where a higher rate level obtains. (Art. 6.3).

(2) *Hours, Wages and Benefits in Public Commercial Vehicle Operation.* Conditions complained of by employees of motor trucking operators arise with particular frequency in the case of Class "D" (contract) carriers, who are under no obligation to maintain a regular freight service. The twin evils of excessively long hours and low wages were also indicated in the operation of Class "E," milk and cream carriers, and Class "F," carriers of livestock, construction materials, coal and lumber. (Art. 6.4).

(a) *Highway Drivers.* The more stable public commercial vehicle operators grant a 60-hr. week to highway drivers without the incubus of the split day. For this they frequently pay from \$20 to \$25, and in some cases up to \$35. Many operators, while providing a 60-hr. week, are not able to pay more than \$12 to \$20 per week. Still others not only require very long hours of their drivers but pay low wages. Days of 11 to 14 working hours are comparatively common; 14 to 18 hrs. of duty have been found to occur with disconcerting frequency; duty periods of 18 hrs. and up to 24 hrs. have been reported in a sufficient number of cases to be noteworthy. Weeks of from 70 to 100 hrs. in the busy season are distressingly common and some were reported up to as much as 115 hrs. In many instances, badly-split days were disclosed, involving from 6 to 9 hrs. of work in a spread of from 12 to 15 hrs. and in other cases working periods of 10 to 14 hrs. in a spread of from 17 to 19 hrs.

In a substantial number of cases men were reported as working from 67½ to as long as 115 hrs. per week for wages ranging from \$9 to \$12. A wage of \$15 for a working week of from 60 to 84 hrs. was found to be very common.

The percentage of cases involving extremely long hours appears to be definitely greater than the percentage of men working for correspondingly long

hours in the railway service. While in public commercial vehicle motor trucking operations a wage of from \$12 to \$20 for a 60-hr. week is common, the wage of the roughly comparable truckers and porters in station service on a 60-hr. week basis is about \$30 and of vehiclemen in the railway express service from \$30 to \$35.

While the total length of the working day in the marine service may be 12 hrs., the shifts are commonly only one-half of this, as compared with a continuous tour of duty in motor trucking that may well amount to anything from 11 to 14 hours. and in some cases much longer. Including the value of the board received, the pay, adjusted to a 60-hr. week, for men requiring skill comparable to that of motor truck drivers is usually from about \$15 to \$22. Truck drivers are consequently paid about as well as corresponding employees in the marine service but work under less advantageous conditions than deck hands so far as time is concerned.

(b) *Pick-Up and Delivery Drivers.* In pick-up and delivery work the better operators are able to maintain a 60-hr. week for wages ranging from \$12 to \$24. Some, while observing a 60-hr. week, pay wages as low as \$10. A substantial number of operators expect men to work from 66 to 87 hrs. a week for wages from \$18 to \$26.

On the same time basis, pick-up and delivery drivers are consequently paid definitely less than corresponding men in the railway service or in the railway express service where wages might run from \$29 to \$35. On the other hand, on the same time basis, the pay is practically the same as in the marine service.

(c) *Warehousemen and Platform Men.* Generally, a 10-hr. day is maintained in warehouse and platform service, but in the case of certain operators about one-half of the days worked were over 10 hrs. and the weeks ranged from 65 to 79 hrs., with some of them as high as 85 hrs. Wages of \$12 to \$15 are common, although good operators pay from \$17 to \$27 outside of Toronto and from \$18 to \$33 in Toronto.

These earnings are less than would be included in the range of \$29 to \$35 paid by the railway services for corresponding tasks, and are commonly about the same amounts as paid in the marine service.

(d) *Shopmen.* In the shop service of the public commercial vehicle operators the hours generally range from 48 to 60 per week and the wages from \$18 to \$33, with the greater number of operators paying between \$22 and \$30. In the railway service, machinists, blacksmiths and related tradesmen would be paid about \$48 for a 60-hr. week. Consequently, the general level of wages of the shops of the public commercial vehicle operators is strikingly less than in the railway shops.

(3) *Hours, Wages and Benefits in Private Commercial Vehicle Operations.*

(a) *Drivers.* Variations in the working week are very great amongst the operators of private commercial vehicles, the reported hours ranging from 48 to 115½. Financially strong operators maintain a working week from 48 to 60 hrs. with wages generally from \$18 to \$35 per week. Benefits of considerable value are often granted. In one case these amount to over \$4 per week.

Operators of intermediate status frequently require men to work over 70 hrs. per week with salaries ranging from \$18 to \$30 per week. During rush periods, particularly during the fruit and canning season, working weeks of from 70 to 100 hrs. are common, with the wages often ranging from 20 cents to 35 cents per hr., yielding a weekly wage of from \$14 to \$35. Few, if any, benefits are added to the wages paid.

Comparison with the related wage of from \$29 to \$35 in the railway service indicates the generally lower compensation paid by the proprietors of private fleets of motor trucks. On the same time basis the pay is, however, somewhat better than in marine transport, even after including board in the latter case.

(b) Warehousemen. Private operators generally observe a working week within 60 hrs. and pay from \$21 to \$29. Comparable wages in the railway service, based on the 60-hr. week, would be from \$30 to \$39.

(c) Shopmen. Weeks of 44 to 60 hrs. are generally maintained for shopmen in the service of private operators and the wages range from \$20 to \$40, usually between \$25 and \$32. The general level is lower than the earnings in the corresponding shop trades in the railway service, which would be about \$38 for a 48-hr. week.

(4) Hours, Wages and Benefits in Public Vehicle (For-hire Bus) Operation.

(a) Drivers. Drivers of public vehicles work from 30 to 60 hrs. per week, usually between 44 and 54 hrs. The pay commonly ranges from \$25 to \$30, being distinctly less than is paid railway engineers, brakemen or baggagemen and generally somewhat lower than is paid freight truckers or railway express men. On the other hand, it is definitely higher than is paid marine transport workers of corresponding skill.

(b) Shopmen. In the shops of public vehicle operators the hours generally range from 44 to 48 per week with wages for mechanics lying between \$24 and \$29. For the standard week of 40 hrs. in the railway service, mechanics are paid about \$32. For 48 hrs. it would be about \$38.

1.17—Rates and Fares Charged by Motor Transport.

FINDINGS.

(1) *Basis of Motor Transport Rates.* From the evidence it was made apparent to the Commission that the only science of rate making for motor transport, as for railway or other transport, is that the rates must move commerce from one place to another at a charge which, in relation to the total traffic moving, will pay the transport company its operating expenses and yield a reasonable return on the investment. (Art. 10.2).

From the many representations respecting rates made to the Commission, one simple fact emerges: the operators, in the great majority of cases, have no other rule than to make the best bargain possible with the shipper and hope that the earnings will be a little more than the cost of operating the business. (Art. 10.19).

(2) *Rates Recommended by the Automotive Transport Association.* Since 1930, the Automotive Transport Association of Ontario has continued to urge upon its members the adoption of a freight classification and a rate tariff with a view to regularizing the rate situation in the Province. While many operators have made an attempt to introduce the Association rates, they have generally been unable to do so in the face of the refusal of other transport operators to conform. The rate structure recommended by the Association is the railway pick-up and delivery schedule of rates with certain exceptions. (Art. 10.15).

(3) *Rate Cutting in Motor Transport.* During the past five years drastic reduction in motor transport rates has come through severe competition within the industry and with other forms of transport, particularly the express and freight departments of the railways.

The Commission finds that in very many instances shippers have been instrumental in bringing about reductions of rates through the practice of "shopping around." An operator, threatened with the loss of business if he does not conform to a rate which he is told by the shipper can be obtained elsewhere, will often conform, although in so doing he may be doing business at no profit, or even at an actual loss. On the other hand, certain highly responsible shippers have declined to entrust the transport of their goods to operators charging other than reasonable rates. (Art. 10.18).

In view of the evidence, the Commission is of the opinion that the existing chaos in the rate structure is due primarily to competition within the motor transport industry itself. (Art. 10.22).

(4) *Avoidance of Running Light on Return Trips.* One of the principle sources of severe competition amongst motor truck operators is the desire to avoid making return runs with vehicles light or only lightly loaded. Whatever revenue is obtained in excess of the out-of-pocket expenses added to look after handling and hauling a return load is so much to the good. In motor transport, as in the railway or express service, it is apparent that, within the limits of the equipment and personnel that would be employed in any event, it is better to reduce a rate and get some revenue than to refuse the revenue and keep expenses constant. (Art. 10.9). While the disorganizing effect on the rate structure of quoting excessively low rates in order to attract a return load is obvious, the Commission is convinced that it is bad economics to establish rates on the supposition that a transport vehicle will normally travel one way loaded and the other way light. (Art. 10.23).

(5) *A Proper Rate Basis.* Due to the essential difficulties of the rate situation, the Commission is convinced that workable tariffs of rates could be formulated only after careful study by the industry itself and adherence to them could be secured only by the exercise of governmental authority.

Due to the absence of public regulations prescribing the method of accounting to be used and the returns to be filed with the Government, the cost records of many of the motor trucking organizations were of little value for the purposes of the Commission. In the case of some of the public commercial vehicle operators the business of transport is carried on in complete ignorance of the costs. Instances were not lacking of rates so low that after deducting a fair amount for the pick-up and delivery costs scarcely anything was left to cover line haul.

As a result of its analysis of all available cost data the Commission is of the opinion that any rate which is less than one-tenth of a cent per hundred pounds per mile, plus four cents per hundred pounds in the case of Class "C" carrier operations, and plus a further nine to fifteen cents per hundred pounds depending upon the points of origin and destination, in the case of "A" operations, represents non-remunerative operations, if not unfair competition. It would point out, however, that rates materially higher than the above may be neither remunerative to the transport operator owner nor in any sense fair rates, but it is satisfied that average rates below this level are unreasonable. (Art. 10.20).

1.18—Relation of Actual Motor Transport Rates to Rates of Competing Forms of Transport.

FINDINGS.

(1) *Competition Between Motor Transport and the Railways.* While competition of motor transport with both the freight and the express departments

of the railways has been keenly felt, nevertheless the evidence definitely showed that the principal source of the drastic competition that has disorganized the motor transport business is the competition between the motor transport operators themselves.

(2) *Relation of Actual Motor Transport Rates to Railway Rates and to the Automotive Transport Association Standard Rates.* As a basis of comparison of the rates actually charged by motor transport operators with the railway rates and with those of the Automotive Transport Association of Ontario, a sampling survey was made by the Commission. In 2138 instances it was found that for the general run of package and less-than-carload freight carried within the competitive zone, freight that would be carried by the railways under the pick-up and delivery tariff for \$10 would under the Automotive Transport Association rates be carried for \$9.68 and under the actual average rates charged, for \$8.17. (Art. 10.24).

(3) *Relation of Motor Bus Fares to Railway Passenger Fares.* As a result of its study of typical passenger fares charged from Toronto to fifty-seven points in Ontario the Commission found that the arithmetic averages of the one-way rates per mile charged by the railways and motor coach operators is 2.95 cents for the railways and 2.50 cents for the motor coach operators. Although in thirty-six out of the fifty-seven cases distances are longer by highway than by rail, only in two cases is the coach fare higher than the railway fare, and in four cases it was found equal to the railway fare. From the study it is apparent that coach fares have been set to be equal to, or less than, rail fares between the same terminals, irrespective of distance or the rate per mile necessary to accomplish such. (Art. 10.29).

(4) *Relation of Motor Transport Rates and Fares to Steamship Rates and Fares.* The direct effect of steamship competition on motor transport is not great, but inasmuch as it seriously affects railway revenues it cannot fail to produce repercussions in the fortunes of the motor transport operators.

1.19—Regulation of Commercial Motor Vehicle Operations.

FINDINGS.

(1) *Necessity of Regulation.* The Commission is convinced that supervision of the standards of equipment, service, hours, conditions of labour and details of operating methods of those making use of the highways for commercial purposes has become a duty devolving upon the public authority. The chaos into which the motor transport industry was thrown by reason of the severe and unrestricted competition that developed by 1933 in large measure still exists. As the industry has not of itself been able to remedy the unfortunate conditions that have crept in, some further measure of control involving an application of the power of the state must obviously be set up. (Art. 11.1).

(2) *General Principles of Regulation.* The Commission is of the opinion that in the framing of regulations with respect to commercial motor transport there should be the greatest care observed to avoid either undue restriction or undue stimulation of the industry. In the public interest it should stand on its own feet. There should be no over-regulation. The Commission believes that the duty of the controlling authority should be confined to insurance of the dependability of service, protection of the public against extortionate charges, discrimination and unfair and ruinous competition, the exploitation of labour, dangerous equipment and hazardous operating practices and that it should afford protection of the licensed operators in their legitimate interests. Basic regulations should be made applicable to all commercial vehicles, whether they be publicly or privately operated. (Art. 11.2).

(3) *Criticism of the Present Regulations.* The Commission finds that the public commercial vehicle operators have just ground for complaint in the circumstance that privately operated commercial vehicles are not subject to the same degree of regulation as public commercial vehicles or public vehicles. While under the Commercial Vehicle Act the Lieutenant-Governor in Council may extend to private commercial vehicles any regulations respecting hours of work now applicable to public commercial vehicles, such power has never been exercised. Should any regulations that may be instituted for public commercial vehicles respecting hours, wages, safety, or related matters not apply equally to private commercial vehicles, the operators of public commercial vehicles would be at a disadvantage in seeking business. The present rule limiting drivers to ten hours in any twenty-four has been found to operate as a discrimination between the two classes of vehicles. (Art. 11.7).

(4) *Regulation of Rates.* Low rates inevitably mean low wages, long hours, starved, inefficient and dangerous equipment, loss to the operator, final bankruptcy and disruption of a service on which the public has come to rely. So impressed were the motor transport operators with the seriousness of the situation that some enforcing authority was admitted to be necessary. The numerous efforts made by progressive operators to stabilize rates have largely come to nought through the unwillingness of certain other operators to adhere to the schedule formulated by the majority.

The Commission finds general agreement in the industry respecting the wisdom of requiring operators to file their rates with a regulating authority designated by the Government. There was also general agreement that the regulating authority, if it were to have any disciplinary effect, should have the power to disallow for just cause any rate filed with it. It is the unanimous opinion of the Commission that this alone is not sufficient and that without the power to fix a rate as a last resort, smooth and expeditious rate regulation would be seriously hampered, to say the least.

The Commission concurs in the view generally expressed in testimony that the regulating authority should not proceed of itself to draw up a classification or complete schedules of rates. The industry is better able to do this in the first instance and should be asked to prepare and submit rates that it believes to be fair. (Art. 11.8).

(5) *Hours of Labour.* The Commission finds that radically different interpretations have been put on that portion of the regulations dealing with permissible hours of driving. Certain operators proceed on the assumption that while a driver is not permitted to work on other employment than driving and then be employed at driving on the highway for an aggregate duty period of over ten hours in twenty-four, he might be allowed to drive on the highway first and then work on the platform or at driving in the city for a total of over ten hours. This uncertainty and other practical operating difficulties found by the Commission to be associated with the rule render its modification necessary. While it is manifest from the evidence that a duty period of ten hours per day is widely accepted as not too long for motor transport operations generally, some leeway must also be permitted in order to allow for inevitable delays or emergencies. To compel a driver to lay up his truck at the end of ten hours under all circumstances would demoralize operations and constitute a particular hardship on the driver anxious to get home or to his normal place of rest as quickly as possible. (Arts. 11.10 and 11.11).

RECOMMENDATIONS.

(1) *A Transport Board.* The Commission unanimously recommends the appointment of a Transport Board clothed with powers and authority to deal

fully and completely with the problem of transport in the Province in its varied and complex forms. The conditions of appointment and service should be such that the members of it can act with independence and security. The motor transport industry in Ontario is now in the class of big business and the issues to be faced by any regulating board will be so important and at times so difficult that no Board should be in the position of being impelled to withhold what might be temporarily an unpopular decision. It is suggested that the Board consist of three members appointed for a period of ten years irrespective of political allegiance and during good behaviour should be removable only for cause by the Legislature. They should cease to hold office on attaining the age of seventy years. The powers of the Board should, in the opinion of the Commission, be similar to those exercised by the present Board of Transport Commissioners for Canada. (Art. 11.9).

(2) *Maximum Permissible Hours of Work.* While protracted hours of work repeated daily are admittedly a menace to public safety, the Commission believes that an occasional period of twelve or even fifteen hours in the event of uncontrollable circumstances is neither a menace to health or to safety. For this reason it recommends that the basic day for drivers be considered ten hours with an allowable twelve hours on any one day, providing the total of sixty hours per week be not exceeded, with the exception that these limits be not applicable initially to the operation of private commercial vehicles not exceeding 6000 pounds in licensed gross weight. In order to make allowance for peaks in the fruit and canning season, and possibly in connection with certain other industries, the Commission believes that the usual prescribed working hours might be exceeded by twenty per cent. for periods totalling not more than three weeks in any one year. (Art. 11.11).

While the work of city drivers and warehousemen is not characterized by so great a responsibility as that attaching to the work of a highway driver, it is more continuously labourious and the Commission believes that at the present time an eight-hour day in a spread of twelve hours would be satisfactory for this class of motor transport employees. (Art. 11.11).

(3) *Minimum Permissible Wages in Trucking Operations.* Having regard to all the circumstances, the Commission would recommend that for drivers residing in average Ontario urban centres the minimum wage be an hourly rate such as to yield not less than \$24 to highway drivers for a week of sixty hours, and not less than \$20 to pick-up and delivery drivers. These amounts might be reduced ten per cent. for drivers residing in rural centres or in localities where the cost of living is measurably below that of the metropolitan centres. Wages for helpers, warehousemen and mechanics should be proportionate to those mentioned for drivers. It is recommended that the wage levels mentioned be not applicable initially to the operation of private commercial vehicles not exceeding 6000 pounds in licensed gross weight. (Art. 11.12).

(4) *Character and Fitness of Equipment.* The Commission is of the opinion that the so-called "double hook-ups" and the special trucks or carryalls used for the transportation of automobiles are a definite hazard to the average driver on the highway. In the case of the former, this is associated not only with length but with the danger of "jack-knifing" on icy hills. It would recommend that the maximum permitted length of motor trains or assemblages travelling as a unit be reduced from 50 feet to 40 feet and that this be brought about within a period of three years, unless special freight highways are designated. Moreover, the operation of double hook-ups should not be permitted at times when the roads are known to be slippery.

The Commission does not consider that any reduction in the maximum permitted width of vehicles is practicable.

With a view to promoting further safety of operation the Commission would recommend that the present requirements of the Highway Traffic Act that every trailer or semi-trailer having a gross weight of 3000 pounds or more should be equipped with brakes adequate to stop and hold such vehicle be amended by reducing the limit to 2000 pounds and by providing that no trailer not equipped with brakes should be hauled by a vehicle of lesser unloaded weight than the gross weight of the trailer.

It is recommended that the lighting arrangement at the rear of all trucks or assemblages of vehicles and at each side of them be improved and so fixed that an overtaking driver or one approaching at right angles may be able to judge the nature and length of the vehicle or hook-up that is being approached.

The Commission recommends that for certain special long distance operations, such as moving, the use of sleeper cabs be permitted by special authority. The development of motor transport has not reached the point where intermediate stations can be established at which drivers can be relieved. (Art. 11.14).

(5) *Periodic Inspection of Equipment.* Having regard to the potentialities for danger inherent in the operation of many heavy and fast-moving commercial vehicles on the highways, the Commission recommends that as a prerequisite for the renewal of any vehicle licence the operator should present a certificate of mechanical fitness of the vehicle to be licensed. (Art. 11.15).

(6) *Speed of Commercial Vehicles.* With a view to relieving the congestion on hills that results from slow-moving motor trucks or trains, the Commission would recommend that only such loading be permitted as will enable a freight vehicle or train to move up a 5 per cent. grade at a minimum speed of 15 miles per hour. (Art. 11.14).

(7) *Fitness of Drivers.* To the end that personal fitness of drivers may be secured, the Commission would recommend that before the granting or renewal of any driving permit the applicant should submit from a qualified physician a certificate of physical fitness to undertake the duty of driving. Prior to the granting of the original permit, the applicant should be subjected to an examination or test of his ability to drive heavy commercial equipment, as well as of his knowledge of the mechanical features of the equipment to be driven. (Art. 11.16).

(8) *Week-end Driving.* In the opinion of the Commission, it is not practicable to debar motor transport vehicles from the use of the highways on Saturday afternoons and evenings. Under modern business conditions many trucks set out on Saturday morning or earlier for points so far from their home terminal that return by Saturday noon is impossible. (Art. 11.17).

(9) *Accounting and Returns.* The Commission recommends that regulations be promulgated requiring every operator of both publicly and privately operated commercial motor vehicles to make an annual return to the Transport Board showing all important statistical facts relating to his transport activities. The requirement of an audited financial report would tend to insure that the operator was not continuing to do business at a loss, with disastrous consequences to creditors and employees and eventual inconvenience to the public. (Art. 11.18).

(10) *Exemption for Certain Industries.* Having regard to the evidence, the Commission is persuaded that it is impracticable to institute regulations concerning the hours of work or wages involved in the operation of trucks owned

and operated by farmers or by the farm co-operatives. For this reason it recommends that such vehicles be exempted from regulations pertaining to the matters mentioned. The Commission does not feel, however, that this exemption should be made applicable to vehicles engaged in manufacturing or processing industries. (Art. 11.21).

All of which we humbly submit for Your Honour's gracious consideration.

E. R. E. CHEVRIER,
Chairman.

C. R. YOUNG,
Commissioner.

DALTON C. WELLS,
Secretary.

E. ROY SAYLES,
Commissioner.

Toronto, December 23, 1938.

CHAPTER II

AUTHORITY FOR THE INVESTIGATION

SECTION 1—AMENDED ORDER-IN-COUNCIL

The authority for the issuing of the Royal Commission was contained in an Order-in-Council made on the 26th day of August, 1937. The terms of Reference therein contained were amended by subsequent Orders-in-Council made on the 13th day of October, 1937, and on the 28th day of April, 1938. The Order-in-Council as amended is here set out.

Copy of an Order-in-Council approved by the Honourable the Lieutenant-Governor, dated the 26th day of August, A.D., 1937, as amended and modified by subsequent Orders-in-Council made on the 13th day of October, 1937, and on the 28th day of April, 1938.

Upon the recommendation of the Honourable the Attorney-General, the Committee of Council advise that pursuant to The Public Inquiries Act, Revised Statutes of Ontario, 1927, Chapter 20, a Commission be issued appointing Edgar Rodolphe Eugene Chevrier, one of His Majesty's Justices of the Supreme Court of Ontario, Clarence Richard Young of the City of Toronto in the County of York, Professor of Civil Engineering, and Edwin Roy Sayles of the Town of Renfrew in the County of Renfrew, Publisher,—Commissioners,—

NOTE:

This paragraph substituted for the original paragraph by amending O.C., 13th October, 1937.

1. To investigate, inquire into and report upon all matters pertaining to or affecting persons or corporations engaged in the business and operation of transporting freight by motor vehicles, whether for gain, or not for gain, and passengers by motor vehicle for gain, and more particularly:
 - (a) The tolls and rates charged by the owners or operators of such motor vehicles for passengers and freight and the method of fixing and determining the same;
 - (b) The taxes, licence fees or other charges imposed by any taxing authority upon the owners or operators of such motor vehicles;
 - (c) The wages paid to their employees by the owners or operators of such motor vehicles;
 - (d) The hours of labour of the employees required by the owners or operators of such motor vehicles;
 - (e) The subsidies, or otherwise, contributed by any governmental body, including any municipal corporation, to the owners or operators of such vehicles.

2. To compare and report upon the tolls and rates charged by the owners or operators of such motor vehicles and all taxes, licence fees or charges imposed upon them with the tolls and rates charged by and the taxes, licence fees or charges imposed upon any other mode of transportation by rail, water or air.
3. To compare and report upon the wages paid and the hours of labour demanded by the owners or operators of such motor vehicles with the wages paid and the hours of labour demanded by the owners or operators of other modes of transportation by rail, water or air.

NOTE:

This paragraph substituted for the original paragraph by amending O.C., 13th October, 1937.

4. To investigate and report upon the present method of licensing and regulating such motor vehicles, and what further provisions should be made for the licensing or regulating of persons or corporations transporting passengers by motor vehicles for gain, and persons or corporations transporting goods by motor vehicles whether for gain or not, in order as far as possible to ensure that just and reasonable service shall be furnished by such persons or corporations, and to prevent such persons or corporations from unfairly competing with one another, or with other forms of passenger and freight transportation.

NOTE:

This paragraph substituted for the original paragraph contained in The Royal Commission by amending O.C., 28th April, 1938.

5. To investigate by the consideration of such written briefs or memoranda as may be submitted by interested parties and report upon the annual cost of constructing, maintaining and administering all public roads in the Province of Ontario and the contributory cost, direct or otherwise, by the municipalities affected, and to what extent the cost of such public roads should be met by the owners and operators of such motor vehicles.

The Committee further advise that the Commission contain a provision conferring the power upon the said Commissioners of summoning any person or corporation and requiring them to give evidence on oath and to produce such documents and things as the Commissioners may deem requisite for the full investigation into the matters for which they are appointed to inquire and examine.

SECTION 2—THE ROYAL COMMISSION

Pursuant to the Order-in-Council of the 26th day of August, 1937, a Commission was issued under the Seal of the Province of Ontario as follows:

SEAL
OF
THE PROVINCE OF
ONTARIO

(CREST)

“H. A. BRUCE”

PROVINCE OF ONTARIO

G E O R G E T H E S I X T H, by the Grace of God
of Great Britain, Ireland and the
British Dominions beyond the
Seas KING, Defender of the
Faith, Emperor of India.

TO

THE HONOURABLE EDGAR RODOLPHE EUGENE CHEVRIER,
one of Our Justices in Our Supreme Court of Ontario

and

CLARENCE RICHARD YOUNG,
of the City of Toronto, in the County of York,
Professor of Civil Engineering,

and

EDWIN ROY SAYLES,
of the Town of Renfrew, in the County of Renfrew,
Publisher,

G R E E T I N G :

WHEREAS in and by Chapter 20 of The Revised Statutes of Ontario, 1927, entitled “The Public Inquiries Act,” amongst other things it is enacted that whenever the Lieutenant-Governor in Council deems it expedient to cause inquiry to be made concerning any matter connected with or affecting the good government of Ontario or of the conduct of any part of the public business thereof or the administration of Justice therein and such inquiry is not regulated by any special law, he may, by commission, appoint a person or persons to conduct such inquiry and may confer the power of summoning any person and requiring him to give evidence on oath and to produce such documents and things as the commissioner or commissioners deem requisite for the full investigation of the matters into which they are appointed to examine;

AND WHEREAS our Lieutenant-Governor in Council of our Province of Ontario deems it expedient to cause inquiry to be made concerning the matters hereinafter mentioned;

NOW KNOW YE that WE, having and reposing full trust and confidence in you the said the Honourable Edgar Rodolphe Eugene Chevrier, Clarence Richard Young, and Edwin Roy Sayles, DO HEREBY APPOINT YOU to be OUR COMMISSIONERS, with all the powers authorized by the said Act,

1. To investigate, inquire into and report upon all matters pertaining to or affecting persons or corporations engaged in the business and operation of transporting freight and passengers by motor vehicles for gain, and more particularly:
 - (a) The tolls and rates charged by the owners or operators of such motor vehicles for passengers and freight and the method of fixing and determining the same;
 - (b) The taxes, licence fees or other charges imposed by any taxing authority upon the owners or operators of such motor vehicles;
 - (c) The wages paid to their employees by the owners or operators of such motor vehicles;
 - (d) The hours of labour of the employees required by the owners or operators of such motor vehicles;
 - (e) The subsidies, or otherwise, contributed by any governmental body, including any municipal corporation, to the owners or operators of such vehicles;
2. To compare and report upon the tolls and rates charged by the owners or operators of such motor vehicles and all taxes, licence fees or charges imposed upon them with the tolls and rates charged by and the taxes, licence fees or charges imposed upon any other mode of transportation by rail, water or air;
3. To compare and report upon the wages paid and the hours of labour demanded by the owners or operators of such motor vehicles with the wages paid and the hours of labour demanded by the owners or operators of other modes of transportation by rail, water or air;
4. To investigate and report upon the present method of licensing of such motor vehicles, and what further regulations should be made for the licensing of persons or corporations transporting passengers by motor vehicles for gain, and persons or corporations transporting goods by motor vehicles whether for gain or not, in order as far as possible to ensure that just and reasonable service shall be furnished by such persons or corporations, and to prevent such persons or corporations from unfairly competing with one another or with other forms of passenger and freight transportation;
5. To investigate and report upon the annual cost of constructing, maintaining and administering all public roads in Our Province of Ontario and the contributory cost, direct or otherwise, by the municipalities affected, and to what extent the cost of such public roads should be met by the owners and operators of such motor vehicles;

AND WE HEREBY CONFER on YOU, Our said Commissioners, all the powers which may be conferred upon the said Act, giving to you the power of summoning any person and requiring him to give evidence on oath and to produce such documents and things as you may deem requisite for the full investigation of the matters into which you are hereby appointed to examine.

TO HAVE, HOLD and ENJOY the said Office and Authority for and during the pleasure of Our Lieutenant-Governor in Council of Our Province of Ontario.

IN TESTIMONY WHEREOF We have caused these Our Letters to be made Patent and the GREAT SEAL of Our Province of Ontario to be hereunto affixed

WITNESS: THE HONOURABLE HERBERT ALEXANDER BRUCE,
a Colonel in Our Royal Army Medical Corps, Fellow
of the Royal College of Surgeons of England, etc.,
LIEUTENANT-GOVERNOR OF OUR PROVINCE OF ONTARIO

At our Government House, in Our City of Toronto, in Our said Province, this twenty-sixth day of August in the year of Our Lord one thousand nine hundred and thirty-seven and in the first year of Our Reign.

BY COMMAND

“H. C. NIXON”
Provincial Secretary.

CHAPTER III

INTRODUCTION

SECTION 1—REQUIRED SCOPE OF THE INVESTIGATION

3.1—Importance of Motor Transport in Ontario. Along with the phenomenal growth of passenger motor car traffic in Ontario during the last twenty years, there has been a still more remarkable increase in the use of commercial motor vehicles. The problem of providing adequate highway facilities for both classes of motor traffic that was thrust upon governmental and municipal authorities during the closing years of the war has grown enormously, both in magnitude and complexity.

At the end of the registration year 1937 there were in the Province 74,867 trucks and tractors operating for hire or not for hire, 31,771 commercial trailers operating similarly and 820 buses. Assigning average costs of these vehicles, there is at the present time an original investment in vehicles of the class comprehended by the Order of Reference of not less than \$130,000,000. This, of course, does not include investment in real estate or in equipment other than the vehicles themselves.

Based on the detailed submissions of eighteen typical trucking organizations, the employees of all classes per power unit, that is per truck or tractor, number about 1.95. Making due allowance for a somewhat smaller personnel for privately-operated light trucks, there would still be, with the 74,867 vehicles engaged in the haulage of freight on the highways of Ontario, and including some 850 persons reported by the Ontario Association of Motor Coach Operators as engaged on a full-time basis in the operation of interurban coach services, at least 120,000 persons directly engaged, in one capacity or another, in connection with the operation of commercial motor vehicles in the Province.

Many more persons are, of course, employed indirectly in garages, repair shops, gasoline stations, manufacture of equipment, or in occasional or seasonal services.

Moreover, far greater numbers than those employed either directly or indirectly in commercial motor transport are concerned with the conditions therein existing. All competing forms of transport are necessarily involved, for example, the 45,000 persons, or thereabouts, directly employed by the steam railways in the Province. Indeed, by reason of the basic influence of transportation on the cost of doing business, the whole fabric of commerce and industry in the Province is vitally affected.

It is therefore obvious that, either directly or indirectly, the livelihood of a very large number of persons in Ontario is affected by commercial motor transport and that any legislative or administrative action that may be taken in connection therewith will have far-reaching consequences.

3.2—Comprehensiveness of the Order of Reference. The original Order-in-Council with the amendments thereto, as reproduced in Chapt. II, has necessarily involved a very comprehensive investigation. In the field to which the Commission was confined, that of commercial motor transport, it has meant a study of all matters relating to tolls and rates, taxes, licence fees, wages,

hours, and the subsidies granted; a comparison of tolls and rates, taxes and licence fees for commercial motor transport with those for competing forms of transport; a comparison of wages and hours with those paid in other forms of transport; the method of licensing and regulating commercial motor transport vehicles; the annual cost of constructing, maintaining and administering the public roads in Ontario, the portion of the cost contributed by municipalities and the extent to which commercial motor transport should bear highway costs.

The formidable character of the undertaking was amply evident at the outset, and for this reason the Commission endeavoured to conduct the investigation with the thoroughness that was deemed essential to the rendering of a comprehensive and dependable report.

SECTION 2—FROM WHOM INFORMATION WAS OBTAINED

3.3—Public Hearings. In view of the importance of the matters to be investigated, it was obviously desirable to explore as much of the field as possible by means of oral evidence. In consequence, the Commission held public sittings in Toronto for the hearing of evidence on 55 days and on 8 days for the hearing of argument. During these hearings 71 witnesses were heard, a complete list of whom appears in Art. A3.1 of Appendix A-III. Cross-examination of witnesses by counsel appearing for various interests before the Commission was permitted.

3.4—Written Submissions. Written submissions were received, either on request or on the initiative of those making them, from 98 bodies or persons. In many cases these were of very great importance, involving protracted study by the Commission. A list of those making written submissions only is contained in Art. A3.2 of Appendix A-III.

In accordance with the desire of the Government of the Province, as expressed in the amendment of April 28, 1938, to the Order-in-Council, no oral evidence was heard on matters coming within the terms of Section 5 of the Reference, that is, on the annual costs of the public roads in the Province and the extent to which such costs should be met by the owners and operators of commercial motor vehicles.

The Commission consequently found it necessary, in order to report adequately upon these matters, to inform itself by other means than oral evidence. It was considered that the Government wished to be furnished with findings and recommendations concerning all matters comprehended by the Order-in-Council as amended and that the Commission would be remiss in its duty if it failed to recognize easily ascertainable facts, or the views of qualified persons, that might have an important bearing on the questions at issue, whether these were communicated as formal submissions, were drawn to its attention by either interested or disinterested persons or were elicited by personal enquiry. The Commission believes that its duty to the Province was to ascertain as many of the facts as might be uncovered within the time at its disposal, and on any particular matter not to rely merely upon those facts or opinions that were selectively placed before it by interested parties. It believes that it is under the further duty of rendering an opinion on all of the known facts, and not merely on that portion of them that happened to be communicated in oral evidence or in formal submissions.

In this assumption the Commission believes that it has acted in conformity with the practice of other Royal Commissions appointed in the Province. The procedure adopted by these bodies was felt to be of importance in the present connection.

The Royal Ontario Nickel Commission, 1917, which was appointed under the Public Inquiries Act, visited nickel mines and unworked deposits in the Province, made inquiry of qualified persons, perused reports made by competent investigators, searched the literature of the subject and availed itself of the information placed at its disposal by persons who had obtained it at first hand. The Commission visited many mines and plants abroad, took testimony there and also obtained "from other sources much information of interest and value by means of conversations and interviews."¹

The Royal Commission on the Use of Radium and X-Rays in the Treatment of the Sick, *etc.*, 1932, operating under the Public Inquiries Act, conducted part of its investigations in the United States and Europe, where it met medical bodies and individual physicians and observed the curative effects of radium and X-rays.

The Royal Commission on Automobile Insurance Premium Rates (the late Mr. Justice Hodgins), 1930, visited the United States and heard opinions and criticisms. The Commissioner made personal inquiries and studied the literature. In addition to those who testified formally, many communicated their views to him in correspondence.²

In the Children's Aid Society case³, it was made clear that a Commission should avail itself of all reasonable sources of information, thus giving wide scope to the inquiry. In a concurring judgment, Mr. Justice Riddell remarked that a Royal Commission is . . . for the purpose of informing the people concerning the facts of the matter to be inquired into. Information should be sought in every quarter available . . . Everyone able to bring relevant facts before the Commission should be encouraged, should be urged, to do so.

Due to the necessity of having to curtail its hearings of public testimony, and not being able to hold sittings outside of Toronto, the Commission has not been able to carry out in detail a comparative study of air transport and motor transport.

SECTION 3—APPRAISAL OF THE PROBLEM

3.5—The Public Interest Must Be Paramount. Throughout the inquiry, the Commission has held to the view that the main question at issue was not primarily as to whether one form of transportation was being unduly hampered in relation to another, but whether, under the existing order of things, the interests of the users of transportation in Ontario were being adequately served. In other words, the public interest has at all times been deemed to be paramount.

On the basis of this concept of the situation, it is obvious that those forms of transport that are intrinsically most economical and most efficient for each type and length of haulage must be allowed to prevail. In appraising the economic merits of any form of transportation, however, it is manifest that full consideration must be given to the necessity of reimbursing the general public by the transport agency concerned for any facilities provided, or services rendered, by the public authority.

The Commission endorses the general views expressed by the Joint Committee of Railroads and Highway Users, in this connection, namely:⁴

¹Report, p. xxiii.

²Report, p. 10.

³*Re the Children's Aid Society of the County of York*, (1934) O.W.N. 418 (C.A.).

⁴Regulation and Taxation of Highway Transportation, New York, January 30, 1933, p. 7.

"The public is entitled to the benefit of the most economical and efficient means of transportation by any instrumentalities of transportation which may be suited to such purpose, and no legislation should be enacted which has for its purpose the stifling of any legitimate form of transportation. The supreme test must always be the interest of the public. The public's right to the selection of the agency of transportation which it wants and which it finds most useful must be respected."

The declaration made by the National Transportation Committee of the United States that the transportation problem cannot be solved on the theory upon which horses are handicapped in the race is unassailable.⁵

Sound views were expressed in this regard in the Report of the Conference on Rail and Road Transport, London, 1932, thus:⁶

"The railway representatives ask no more than that this (commercial motor) transport should pay its fair share of the cost of the roads they use as their permanent way. They do not ask that, either by taxation beyond this point or by restrictive regulation not required in the public interest, traffic should be forced back to the railways which they are not able to carry so conveniently or on so low a basis of real cost. They do not ask that any class of service which may have been rendered obsolete or comparatively uneconomical by the new form of transport now available should be artificially maintained. In other words they do not ask for any action which would tend to secure a different division of function than would result if a single administration, without divergence of financial interest, were solely occupied in meeting the needs of the public by the most convenient and economical arrangement of transport."

While it is obvious that in the national interest means must be found to maintain the railways in efficient operating condition in order that they may be able to provide vastly important services which cannot be performed by other forms of transportation, the problem is a federal one and consequently outside the purview of the Commission. Conservation of investments in railway property and reduction of taxation incurred by the "railway problem" could manifestly have no place in the present inquiry. Under the Reference, attention had necessarily to be restricted to an appraisal of the strict economic status of the various forms of transportation in the Province and their relative suitability to serve the needs of the people in it.

3.6—Contribution of Motor Transport to Public Welfare Recognized.

It must be recognized that motor trucks are now serving many communities which have never been directly served by rail or water. They have in many instances reduced the cost of freight transportation and have stimulated business. By giving frequent and expeditious service to areas already enjoying direct rail facilities they are assisting in the decentralization of industry and the commendable building up of prosperous small communities distant from the large cities. The areas within which the truck renders its most useful service is that which can be served one or more times during the day and the area within which overnight delivery can be made.

The importance of inter-city truck transportation to metropolitan centres is effectively shown from a summary of the services rendered to the city of Toronto prepared by the Automotive Transportation Association of Ontario.⁷ From this it appears that there are 180 common carrier operators giving overnight service between Toronto and points as far distant as New York city. It is estimated that from 90 to 95 per cent. of Toronto's entire daily milk

⁵Report, New York, February 13, 1933, p. 18.

⁶The so-called "Salter Report," p. 13.

⁷Brief, February 23, 1938, p. 6.

consumption is transported to the city from farms as far distant as 140 miles and over one thousand cattle trucks come to the Toronto markets once a week.

In the field of passenger transportation, motor buses have likewise contributed an important facility to the people of this Province. Communities far removed from railway lines are now being regularly served and those on lines that have restricted passenger train movements are receiving a much more frequent service. An incidental advantage to the youth of the country is the frequent utilization of the motor bus for transporting children to school over considerable distances.

CHAPTER IV

DEVELOPMENT OF THE HIGHWAY SYSTEM OF ONTARIO

SECTION 1—FINANCING AND CONTROL

4.1—Pioneer Road Building. For the early settlers the problem of transport facilities largely consisted in the making and repairing of roads leading to the waterways, which were then the only long distance means of communication. Local groups attempted to deal with the situation by their own voluntary efforts, supplemented by the uncertain support of the statute labour law of 1793. The necessity for roads was so urgent that labour and money were willingly subscribed, while, at the same time, regular troops and militia were often employed in opening and constructing roads, such as Dundas Street and Yonge Street.

At first, but little cash assistance for road building was derived from the Government of the Province. By 1826 it had amounted to only £200, as at that time the Government was much more interested in inland water navigation.¹

The inadequacy of the measures that had hitherto been employed led to the widespread adoption of the principle of the "turnpike" system, which had been introduced in Great Britain about the middle of the seventeenth century. As a result, the construction and operation of toll roads and bridges became common, following the passage of the first Toll Road Act in 1829. Private persons were assisted by governmental loans and grants. For example, the Government, in 1833, raised £10,000 for toll roads in York county, with interest payable from the toll revenues.² The rates of tolls were controlled by Commissioners appointed by the Governor-in-Council and it was sometimes arranged to collect by means of a special tax the deficiency between the tolls and the interest due. Before the Union of the Provinces, in 1841, the greater part of the provincial revenue had been spent on roads and bridges, amounting to £200,000 in all.

Municipalities themselves frequently took an active part in toll road and bridge projects. Under the Municipal Act of 1849³ they were empowered to take stock in, or loan money to, any incorporated road or bridge company in whose road or bridge the inhabitants of the township would be sufficiently interested to warrant participation. In accordance with that Act "all dividends, interest and proceeds to arise or be received from such stock or loan" were to be "at all times applicable to the general purpose of such Municipality and to go in reduction of the rates required to be levied for such purpose." In addition, municipalities were given the power to raise money either by way of tolls to be paid on any township or county bridge, road or other work, to defray the expense of making, repairing or maintaining such work.

At that early date, then, both the provincial government and the municipalities exercised the right, by themselves, or in conjunction with private persons, to enter into the business of providing a transport facility in consideration of tolls to be collected.

¹Report of the Public Roads and Highways Commission, 1914, p. 178.

²*Ibid.*, p. 180.

³S.C. 1849, c. 81.

4.2—Development Under the Rural Municipalities. With the enactment of the Municipal Act of 1841⁴, and particularly under the Act which replaced it in 1849⁵, which constituted a fundamental code of municipal rights and responsibilities, the construction and maintenance of highways passed almost entirely under the control of the local municipalities. The conferred right to take over toll roads and bridges from private owners was later to be widely exercised.

With the coming of the railways, in the early fifties, the roads fell into neglect and became little more than local trails leading to the railway stations. Road-making became almost a lost art, as the provincial expenditures on transport facilities were more and more devoted to railways and canals. Consequently, as they were thrown back on their own resources, the burden of highway construction on the local communities became very great.

While under the Municipal Act of 1849, the road-building activities were largely centred about the townships, a county could, on consent, assume as county roads any highways in the township. Inability to finance enterprises of this kind adequately resulted in little advantage being taken of the granted powers. Nevertheless, five counties had assumed roads from the townships before the turn of the century.

Despite these county activities, little had been accomplished toward the general improvement of the highways in the Province. The work was still very largely in the hands of the townships and frequently more than half of it was performed under the inefficient statute labour system. The remainder was paid for out of local taxes or from the proceeds of short-term loans, no records of which are available. Progress was dependent almost entirely upon local effort, and while the roads in one county might be excellent, according to the standards of that day, they might be almost impassable in the adjoining counties.

The situation became so intolerable that a strong movement for the improvement of the roads of the Province developed in the late nineties. Much of the credit for the successful outcome of the campaign is due to the activities of the Ontario Good Roads Association, which was organized in 1894. It was urged by the Association and its supporters that the existing systems of road maintenance, almost wholly dependent upon statute labour, had outlived their usefulness, and that the adoption of modern and efficient methods was imperative. An intensive educational campaign was carried on for a period of some five years with a view to promoting sound legislation and a system of financing adequate to the situation.

Due to the activities of the Association, the Government of the Province, in 1896, appointed A. W. Campbell as Provincial Instructor in Road-Making, for the purpose of further stimulating an interest in the improvement of country roads. The new Instructor did not hesitate to attack the statute labour system with vigour. While under pioneer conditions, when men laboured conscientiously at the task of building up passable roads, the system worked tolerably well, after the townships began to pay out of tax revenues for the repairing of roads that had been poorly constructed and maintained by statute labour, the quality of the work done under it deteriorated markedly. Those engaged in the work more frequently than not idled away their time, as they knew that the township would, in any event, make the work good.

Although the value of statute labour in Campbell's day was, for accounting purposes, rated at \$1.00 per day per man, he frankly stated that in many instances it was worth less than half of that amount. It was therefore only

⁴S.C. 1841, c. 10.

natural that he should have strongly advocated either its abolition or commutation and the appointment of permanent supervisors. In that effort he was largely successful, although ten out of a total of 571 organized townships still adhere to the system and cannot qualify for provincial subsidy under the Highway Improvement Act.⁵ In addition, 75 unorganized townships in Northern Ontario are organized for statute labour.

As a result of persistent agitation on the part of good roads propagandists, the way was prepared for far-reaching developments in legislation aimed at the general improvement of the highways of the Province.

4.3—Provincial Aid to Colonization Roads. Since the first settlement of the Province provincial aid, in one form or another, had been given for the construction of rural roads and bridges. For example, under the legislation of 1841 large sums were set aside for the construction of roads and bridges under the direction of the Board of Works, a provincial body. The principle of provincial participation in the cost of local works was thus recognized a century ago.

Colonization roads, as now understood, were first authorized by an Order-in-Council of 1848, to be constructed under the Commissioner of Crown Lands.

At Confederation, the Department of Public Works assumed the construction and repair of such roads and from that time on many references are to be found in the Annual Reports of the Department to work done on roads and bridges in unorganized or sparsely settled territory. Such work was under the direction of the Colonization Roads Branch of the Department.

Important legislation fashioned to assist such undertakings was brought about in 1907 in the enactment of what was later to be called the Colonization Roads Act⁶. According to it, grants might be made by the Province for construction or repair of such roads as might be deemed necessary in any unsurveyed or unorganized portions of the Province or in organized townships where roads were required to pass through unoccupied or sparsely occupied districts or other districts unfit for cultivation or settlement. On recommendation of the Minister of Public Works, roads might be undertaken for the proper settlement and development of townships or portions of townships in any provisional judicial district or in the provisional county of Haliburton. The assistance so granted was not to be less than one-third nor more than two-thirds of the estimated cost, and the work was to conform to the standards of the Department of Public Works.

While under the Highway Improvement Act the Minister can, and under the Northern Development Act could, until 1935, make expenditures on the highways at his discretion, so long as a credit remains in the applicable fund, subsidies under the Colonization Roads Act are individually voted by the Legislature.

No subsidy under the Colonization Roads Act was to, or could, be enjoyed if aid had already been received under either the Highway Improvement Act or the Ontario Highways Act.

From March 1, 1919, the administration of the Colonization Roads Act was placed under the Department of Lands, Forests and Mines, which, in 1920,

⁵R.S.O. 1937, c. 56, s. 46(1).

⁶S.O. 1907, c. 17.

through the detachment of the Mines Branch, became simply the Department of Lands and Forests. In that year⁷ the minimum limit of aid, that is one-third of the estimated cost, was removed and at the same time the Province undertook to pay to the municipalities comprehended by the Act 25 per cent. of the purchase price of any necessary road-making machinery or material. The Province further offered to pay 40 per cent. of the salary of a road overseer or foreman to be appointed by any affected municipality, this not to amount to more than \$150 a year, and the grant to be for a period of six years only.

By 1920 the activities of the Colonization Roads Branch were restricted to making grants to various municipalities.

Notwithstanding these changes, the construction and repair of bridges remained with the Department of Public Works until early in 1924, when the construction of all bridges north of the French river was transferred to the Northern Development Branch of the Department of Lands and Forests. Bridges between the French river and that part of Ontario under the charge of the Department of Public Highways continued under the Department of Public Works until April 1, 1937. So-called Southern Ontario was south of a line extending generally from Severn Bridge to Stony Lake, then easterly and roughly parallel to the north shore of Lake Ontario, and about 60 miles north of it to a point almost north of Kingston, then north to a point not far to the west of Pembroke.

In 1928⁸ the administration of the Colonization Roads Act was transferred to the Department of Northern Development and at the same time the Province agreed to pay 50 per cent. of the salary of the overseer of township highways in the affected areas, but not more than \$400 a year.

Under an amendment in 1931⁹ the Province undertook to pay 50 per cent. of the cost of road machinery and material purchased by the townships concerned.

The administration of the Colonization Roads Act was transferred to the Department of Public Highways in 1936, thus centralizing provincial road and bridge building activities of a closely related character.

4.4—Provincial Aid to County Highways. Such provincial aid as had been given the organized municipalities prior to the early years of this century had been spasmodic and relatively ineffective. It was therefore a very great impetus to the construction of better roads that resulted from the enactment in 1901 of what was later to be called The Highway Improvement Act.¹⁰

The important provisions of this measure provided for the setting aside of \$1,000,000 for the improvement of the public highways and for the granting to the counties of the Province of the right to assume, with the consent of the constituent townships, any designated roads. For such work as was in accordance with the regulations of the Department of Public Works, the Province undertook to pay one-third of the cost.

The annual provincial grant was based on an approved statement of expenditure for the year, including therein all costs of labour, material, engineering services, salary of road superintendent, machinery and bridges.¹¹

The jurisdiction of the county over such subsidized roads and its responsibility for their maintenance was clarified in 1905.¹² From time to time

⁷S.O. 1920, c. 25.

⁸S.O. 1928, c. 13.

⁹S.O. 1931, c. 12, s. 2.

¹⁰S.O. 1901, c. 32.

¹¹Annual Report on Highway Improvement, Ontario, 1912, p. 13.

¹²S.O. 1905, c. 27, s. 4.

amendments to the Act increased the total amount of the appropriation until by 1919 it had risen to \$9,000,000.

A significant feature of The Highway Improvement Act was that by-laws for the establishment of a county road system, and for the issue of debentures to raise money for the construction of the roads in it, did not require a vote by the ratepayers. Instead of this, a pre-requisite for the validity of the by-law establishing the system was its approval by the Lieutenant-Governor in Council.

At first the counties were somewhat tardy in taking advantage of the new privileges granted them in this regard, doubtless due, in part, to mistrust of the stipulated conditions. Not until 1903 was any subsidy actually paid and then only to the counties of Simcoe and Wentworth. In the first ten years of operation of the Act only nine counties had taken advantage of it and not until the season of 1919 did the last of the thirty-seven counties, the county of Peterborough, come into the arrangement. In accordance with it the counties took over from the townships the more important highways within their borders, meeting their share of the obligation by debentures, where the expenditure could not be met out of current taxes.

A step very much in the interests of quality, uniformity and consistency in highway construction and maintenance was taken under an amendment to the Act in 1912.¹³ By this it was provided that if advantage was to be taken of the provisions of the Act the county must name an engineer or other competent person approved by the Minister of Public Works to act as county road superintendent under the direction of the county council.

Further encouragement of the counties in their road building programmes was afforded in the far-sighted and highly valuable report of the Public Roads and Highways Commission, 1914. This body, composed of Messrs. C. A. Magrath, W. A. McLean and A. M. Rankin, conducted a thorough investigation of the whole subject of public roads and highways in the Province, to which further reference will be made later. In that report, it was recommended that the control and management of all roads be left to local bodies, and that greater contributions be made by the Province for both county and township roads.

Growing out of the report of the Commission, an amendment to the Highway Improvement Act¹⁴ was made in 1915 which authorized the increasing of the provincial grant to counties from 33 $\frac{1}{3}$ per cent. to 40 per cent., effective with the season 1916, but limited this to construction. In the total, however, expenditures for equipment, materials and superintendence might be included.

The Ontario Highways Act, 1915,¹⁵ which was also prompted by the report of the Public Roads and Highways Commission, authorized a grant by the Province of twenty per cent. of the cost of approved maintenance work on county roads taken over under the Highway Improvement Act, this being limited to a term of fifteen years. Such a provision was highly desirable if, for no other reason, the disposition of county road superintendents to neglect maintenance in favour of construction was to be counteracted.

Another provision, of importance to the counties, was the authorization of suburban roads systems, which, while continuing to be county roads, were to receive aid from the Province of 40 per cent. of the cost of construction and 20 per cent. of the cost of annual maintenance, and from the city or town concerned 30 per cent. for construction and 40 per cent. for maintenance.

¹³S.O. 1912, c. 11.

¹⁴S.O. 1915, c. 16, s. 5.

¹⁵S.O. 1915, c. 17.

Of further assistance to the counties was a 1917 amendment to the Highway Improvement Act which permitted both salary and travelling expenses of the county road superintendent to be treated in full as expenditures for construction¹⁶ and consequently superintendence, material and equipment purchased or repaired became eligible for a grant to the extent of 40 per cent.

At the same time, a new class of highway, a "provincial county road," was established, intermediate in importance between the ordinary county roads and the provincial highways. Any road designated as such by the Minister might be subsidized to a greater extent than the ordinary county roads, that is to the extent of 60 per cent. of the expenditure for construction, maintenance, material, equipment expenditures and superintendence.

As a result of the 1917 amendments the remainder, some seventeen, of the organized counties within the following two years elected to take advantage of the subsidies made available by the Highway Improvement Act.

Under an amendment to the Ontario Highways Act in 1919,¹⁷ and applicable to work done in that year, the provincial grant for maintenance work on county roads was increased from 20 per cent. to 40 per cent.

By the same statute it was provided that any suburban road might be designated as a provincial county road and towards the costs of construction and maintenance of it the city or town was required to contribute 20 per cent. while the Province undertook to contribute 60 per cent., the county merely absorbing the remaining 20 per cent.

A very considerable revision of the Highway Improvement Act was made in 1920¹⁸ and an extensive highway betterment programme inaugurated. In accordance therewith a Highway Improvement Fund account was set up to which sums from various carefully defined sources were to be credited. For the first time it was definitely provided that the receipts of the Province from motor vehicle permits and licences and all other sources of revenue under the Motor Vehicles Act, after deducting an amount sufficient for sinking fund and interest on any outstanding bonds, were to be available for highway improvement.

In 1925¹⁹ the amendments to the Highway Improvement Act brought about a considerable revision of the county road system and reduced its mileage. All work done during the construction season of that year in accordance with the revised system was subsidized by the Province to the extent of 50 per cent. of construction and maintenance, the present rate. This, like the aid formerly extended, applied to equipment, materials and superintendence. At the same time the provincial county roads were abolished and the 50 per cent. subsidy made applicable to all county roads.

Many of the original county roads have from time to time been designated as provincial highways, since 1930 known as the King's Highways. Amendments to the Highway Improvement Act in 1935²⁰ deleted all reference to the share of the cost of these highways to be paid by the counties. Consequently, the only obligation in respect of them resting upon the counties is such debenture debt as exists through the necessity of the counties having had to finance these roads when county roads and, after their assumption as King's Highways, to contribute to them at first 30 per cent. and afterwards 20 per cent. of the

¹⁶S.O. 1917, c. 17.

¹⁷S.O. 1919, c. 19.

¹⁸S.O. 1920, c. 20.

¹⁹S.O. 1925, c. 26.

²⁰S.O. 1935, c. 25.

cost of work done. The outstanding amount of this debt by the counties for county roads and King's Highways, as of December 31, 1935, was \$15,526,327.²¹

4.5—Provincial Aid to Township Highways. Under the Highway Improvement Act of 1901²² it was provided that if a county failed to take advantage of the provincial aid made available under the statute, any township could carry out an improvement plan for its own roads and would be entitled to a grant of one-third of the cost of construction, but not of maintenance, from provincial funds. This right was never exercised.

Recommendations of great importance to the townships were contained in the report of the Public Roads and Highways Commission, 1914. Special attention to township roads was recommended, including provincial aid to the extent of 20 per cent. of the cost of construction. The abolition or commutation of statute labour was urged and in its stead the plan of appointing a permanent township foreman to insure uniformity and continuity of construction and maintenance was recommended.

Under the Ontario Highways Act, 1915²³, it was provided that 25 per cent. of the salary of the township road foreman, or superintendent, should be paid by the Province, but not to involve over \$150 a year, and with the grant limited to three years.

With the revision of the Ontario Highways Act in 1920,²⁴ the Province undertook to assume 40 per cent. of the salary of the township road superintendent for a period not in excess of six years. Apart from the right of a township to profit under the Highway Improvement Act if the county of which it formed a part failed to take advantage of the privileges of that Act, the townships had not been eligible for subsidy, except in the matter of the salary of their road superintendents. However, in the 1920 amendments, the Province undertook to subsidize approved township road work to the extent of 20 per cent. of the cost of both construction and maintenance. Authority was given to include in the expenditure eligible for grant amounts spent for the purchase of gravel pits, stone quarries, materials, equipment and machinery.

In 1924,²⁵ provision was made that in townships where statute labour had been abolished, a township road superintendent was to be appointed and the Province undertook to pay 50 per cent. of his salary and expenses. At the same time, the provincial grant to the township for both construction and maintenance was raised from 20 per cent. to 30 per cent.

Due to the location of some of the townships of the Province, or perhaps the special burdens that might have to be assumed by them, coupled with low assessment, provision was made in 1928²⁶ that for such reasons, or any others that might be considered sufficient, the Minister may approve of a grant not in excess of 80 per cent. of the cost of construction and maintenance but not more than \$6,000 a year.

Further improvement of the situation for townships was made in 1930²⁷ when the grant in respect of both construction and maintenance was raised to 40 per cent., the grant for superintendence remaining 50 per cent. of the salary and expenses of the township road superintendent.

²¹Annual Report of the Department of Highways, 1936, p. 47.

²²S.O. 1901, c. 32, ss. 4 and 8.

²³S.O. 1915, c. 17.

²⁴S.O. 1920, c. 22.

²⁵S.O. 1924, c. 27.

²⁶S.O. 1928, c. 18.

²⁷S.O. 1930, c. 10.

Continuing the trend, the Minister was authorized by Order-in-Council, in 1937, to raise the subsidy to 50 per cent. of all approved expenditures on township highways.

In the 1937 revision of the Highway Improvement Act²⁸ the limit of \$6,000 a year in provincial aid to a township does not appear.

According to the brief of the Ontario Good Roads Association, the proportion of the cost of approved township road work paid by the Province since 1920 has been about 32 per cent. Due to the steady increase in the subsidy the Province now bears at least 50 per cent. of the cost.

4.6—The Provincial Highways. One of the outstanding recommendations of the report of the Public Roads and Highways Commission, 1914, was in effect, that a provincial highway system should be created and operate under the direction of the Department of Public Works. This recommendation was implemented by the Ontario Highways Act, 1915,²⁹ which established a Department of Public Highways to be presided over by the Minister of Public Works and Highways.

Provision was made in that Act for the setting up of boards under which main roads might be constructed, but advantage was not taken of the authority so granted. The nearest approach to this was the construction of the Toronto-Hamilton Highway by a Commission under the authority of the Toronto and Hamilton Highway Commission Act.³⁰ This road was absorbed into the provincial system in 1925.

It remained for the Provincial Highway Act³¹ to define the general lines of the organization under which the provincial highways of Ontario, since 1930 known as the King's Highways, are constructed and operated. This Act authorized the Minister to assume any highway as a provincial highway and to construct, alter and repair as he might deem necessary. As a result, the Province rapidly acquired large mileages of the more important roads in the counties. Counties through which a provincial highway was to run were required to pay 30 per cent. of the cost of construction and maintenance, the cities doing likewise in respect of provincial suburban roads adjacent to them. The cost of equipment and all general overhead, staff expenses and salaries was assumed entirely by the Province.

The season of 1919 saw a great impetus in highway construction. With the conclusion of the war, plenty of labour was available, and the energies of governments were freed for peace time development. The end of the fiscal year 1918 (October 31) marks a definit turning point in road policy in Ontario. It was beginning to be recognized by all that no road could henceforth be regarded as purely a local one. Motor vehicles had penetrated to every corner of the Province where any roads at all existed and with that penetration the demand for better road facilities grew apace.

Under a later amendment,³² and apparently influenced by the federal grant made under the Canada Highways Act, 1919, the Province undertook to increase its obligation to 80 per cent. of the cost of construction and maintenance.

As has already been noted, the revisions to the Highway Improvement

²⁸R.S.O. 1937, c. 56, s. 47(1).

²⁹S.O. 1915, c. 17.

³⁰S.O. 1915, c. 18.

³¹S.O. 1917, c. 16.

³²S.O. 1920, c. 23.

Act made in 1935 removed all reference to the contribution to the cost of the King's Highways to be made by the municipalities. Consequently, the Province now bears 100 per cent. of the cost of both construction and maintenance of these roads, except for such portions of their length as make use of the streets of cities or towns.

4.7—Provincial Aid to Northern Development Roads. Consequent upon the settlement of large areas of agricultural land and the rapid development of the mining industry in Northern Ontario, it was felt that special measures should be taken to construct roads and bridges in this territory, apart from any aid that might still be derived alternatively under the Colonization Roads Act.

In 1912, an important measure, that was later to be designated the Northern and Northwestern Ontario Development Act, 1912, was passed.³³ In accordance with it, authority was given to raise \$5,000,000 by loan for a variety of development activities in Northern Ontario, amongst which was the making of roads and the improvement of means of transportation and communication. This sum was increased from time to time, so that up to 31st March, 1937, a total of \$66,162,769 had been spent on roads and bridges, by far the most important objective of the Northern Development Fund.

Under the amendments of 1924,³⁴ the administration of the Act was placed under a Minister of the Crown who was authorized to take land for road purposes and to construct and repair roads and order the municipality in which such work was done to pay a proportion of the cost. Prior to that time the entire cost of all such work had been met by the Province.

The administration of both the Northern Development Act and the Colonization Roads Act was, in 1926, placed under the Department of Northern Development, which was then instituted.³⁵

In 1934³⁶ municipalities were empowered to enter into agreements with the Minister to share the cost of constructing and maintaining roads, thus clarifying the procedure which had been carried on previously under the general authority of the Act.

The Department of Northern Development was placed for administrative purposes under the Minister of Highways in 1936, thus concentrating all road and highway bridge activities in which the Province is interested under one administrator. As of April 1, 1935, the Northern Development Fund was closed out and the balance of \$1,549,128 remaining in it was left as an ordinary appropriation to the Department of Northern Development.

Since this important change, many townships in the Northern portion of the organized counties have expressed a desire to operate under the Highway Improvement Act, with its definite provisions for subsidies, running from 50 per cent. to 80 per cent. of the cost of construction and maintenance. This year, for the first time, 213 organized townships that formerly carried out road work under the Colonization Roads Act or the Northern Development Act, are operating under the Highway Improvement Act.

4.8—Aid to Urban Municipalities. Under the 1903 amendments to the Highway Improvement Act³⁷ a county council was empowered to make grants

³³S.O. 1912, c. 2.

³⁴S.O. 1924, c. 14.

³⁵S.O. 1926, c. 10.

³⁶S.O. 1934, c. 35.

³⁷S.O. 1903, c. 26, s. 7.

to towns and villages not separated from the county for improving their highways. At that time no provincial subsidy became payable in respect of such grants.

With the re-enactment of the Act in 1907,³⁸ county grants to non-separated urban municipalities for the improvement of highways forming extensions of, or connections between, different portions of county roads became eligible for consideration as a part of the expenditure entitling a county to share in the provincial subsidy. By an amendment in 1911³⁹ this aid was limited to towns and villages with a population not exceeding 3,000.

The Ontario Highways Act, 1915,⁴⁰ authorized the Minister to make an agreement with the corporation of any village, the population of which was not more than two persons per acre of assessed area, or with the township or county within which the village was located, for the construction or extension of connecting links of main or county roads, but the aid was not to be in excess of \$2.00 per acre of the assessed area of the village.

In the 1917 amendments to the Highways Improvement Act⁴¹ the restriction of the population of a town or village to not more than 3,000 if provincial aid was to be enjoyed was removed.

The Highway Improvement Act in 1920⁴² re-affirmed, with additional detail, the principle that a non-separated town or village might enter into an agreement with the county in which it was situated for the construction and improvement of its streets and, in respect of approved work, the expenditure might form a part of the expenditure recognized under the Highway Improvement Act as a basis for provincial subsidy to the county. This amount was to be re-payable by the county to the town or village concerned.

A desire to assist the urban municipalities further is seen in the amendment of the Highway Improvement Act of 1925,⁴³ when it was provided that where a street in an urban municipality not separated from the county is an extension of or connects different portions of a road in a county system the county undertook to assume the cost of construction and improvement to the extent of twenty feet in width. Such work was to be under the direction of the county road superintendent and in accordance with the regulations of the Department of Public Highways. The cost of it was recognized as a part of the expenditure of the county eligible for a provincial grant.

It was further stipulated that where the work had already been done and connecting links had been constructed in non-separated urban municipalities the county was to remit annually, in the case of a town, 50 per cent. of its proportion of the general county road levy and, in the case of a village, 75 per cent. of its proportion of the county road levy. The refund made by the county was to be deemed a part of the expenditure eligible for the provincial subsidy. Money remitted to the urban municipality was to be spent on connecting links or on such of its streets as might be designated by the Minister.

Some change in the above arrangement was made in 1926.⁴⁴ It was then ruled that, whether there was or was not a county road extension or connection in such urban municipality, the latter would be subject to the annual county

³⁸S.O. 1907, c. 16, s. 2.

³⁹S.O. 1911, c. 11.

⁴⁰S.O. 1915, c. 17, s. 19.

⁴¹S.O. 1917, c. 17, s. 3.

⁴²S.O. 1920, c. 20.

⁴³S.O. 1925, c. 26, s. 3.

⁴⁴S.O. 1926, c. 15, s. 29.

road levy, but the county was to remit, to towns, 50 per cent. of the county road levy raised in such town during the previous year less the cost of repairs done on any country road extension or connecting link or upon any road in the urban municipality included in the county road system during the previous year. For a village, the amount was fixed at 75 per cent.

Another variation was enacted in 1927.⁴⁵ Although a street in a non-separated urban municipality might not actually be a part of the county road system but formed an extension, or connected different portions, of roads included in the county road system, the county undertook to construct or improve to the extent of a twenty-foot width at its own cost, but could claim the provincial subsidy on such expenditure.

In 1927 the Minister was empowered to make an agreement with an urban municipality for the construction of a connecting link or extension of a provincial highway.⁴⁶ In 1930 this power was extended to cover construction, improvement, maintenance and repair, but was restricted to non-separated urban municipalities.⁴⁷

In accordance with the 1935 amendments,⁴⁸ any agreement between the county and a non-separated urban municipality respecting the sharing of costs of roads or streets within the urban municipality, and recognized as a basis of provincial subsidy, must be approved by the Minister before work was commenced. The rebate was to be spent on, or in respect of, streets of the municipality as approved by the Minister.

At the same time it was provided that for a town or village having a population of not more than 2,500, the share borne by the Province for a connecting link of a provincial highway was not to be greater than that of the width of the travelled portion of such highway where it approached the town or village. Where towns, other than separated towns, had a population of more than 2,500, the Province undertook to pay not more than 50 per cent. of the cost of such work up to a width of thirty feet.

No statutory assistance whatever is given by the Province to the streets of cities and separated towns in respect of connecting links or other streets.

In Northern Ontario, however, it has been the practice of the Department of Northern Development to bear a portion of the cost of the main roads passing through the cities and larger towns, generally to the extent of fifty per cent. of the cost of a twenty-foot pavement.⁴⁹

4.9—Provincial Aid Summarized. Table 4.1 exhibits in an easily comprehended manner the extent to which the Province of Ontario has supported the building and maintaining of roads and streets within its boundaries. The assistance is expressed as a percentage of each main class of expenditure, namely, construction, maintenance, superintendence and the cost of road-building material and equipment purchased or repaired. A progressive increase in the percentage of aid is evident, except in the case of certain roads or streets built in Colonization or Northern Development road areas, where townships, when organized, began to assume a part of the cost, whereas in unorganized regions the whole cost was borne by the Province.

⁴⁵R.S.O. 1927, c. 54, s. 28(1).

⁴⁶R.S.O. 1927, c. 54, s. 65(5).

⁴⁷S.O. 1930, c. 10, s. 12.

⁴⁸S.O. 1935, c. 25, s. 6.

⁴⁹Report of the Department of Northern Development for 1929, p. 6.

Table 4.1—Aid Given by the Province of Ontario Since Confederation Towards the Construction, Maintenance and Supervision of Roads and Urban Streets, in Percentages of the Total

C = construction, E = equipment and material for road-building, M = maintenance, S = superintendence.

Date	Colonization Roads (e)	Northern Development Roads	Provincial Highways	Provincial County Roads	County Roads	Township Roads	Urban Streets
1867	(a) 100 C,M,S	...	...	...	...	...
1901	Do.	...	...	...	33 1/3 C,E,S	...	
1907	(b) 33 1/3 to 66 2/3 C, M	...	...	...	Do.	...	County grant to non-separated urban municipalities for connecting links made eligible for provincial subsidy.
1911	Do.	...	...	...	Do.	...	Above subsidy restricted to municipalities not over 3000 in population.
1912	Do.	(a) 100 C,M,S,E	...	...	Do.	...	
1915	Do.	Do.	...	...	40 C,E,S 20 M	25 S	Variable proportion of cost rebated to villages of limited population for connecting links.
1917	Do.	Do.	70 C,M 100 S,E	60 C,M,S,E (till 1925)	40 C,E 20 M (c) 40 S	Do.	Restriction of subsidy to urban municipalities not over 3000 in population removed.
1919	Do.	Do.	Do.	Do.	40 C,M,E (c) 40 S	Do.	
1920	(b) 66 2/3 (max.) C,M 40S; 25E	Do.	80 C,M 100 S,E	Do.	Do.	20 C,M,E 40 S	Eligibility for provincial subsidy of county grants to non-separated urban municipalities reaffirmed.
1924	Do.	(a) 100 C,M,S,E, (b) Less than 100% aid to municipalities.	Do.	Do.	Do.	30 C,M,E (c) 50 S	

Table 4.1—Continued

1925	(b) 66 2/3 (max.) C, M 40 S 25 E	(a) 100 C, M, S, E (b) Less than 100% aid to municipal- ities.	80 C, M 100 S, E	Included in 50 C, M, E, S provincial highways.	30 C, M, E (c) 50 S	County became responsible for cost of 20-ft. strip of connecting links in non-separated urban municipalities. This expenditure eligible for provincial subsidy. Where work already completed, county to remit 50-75% of the urban municipality's proportion of the county road levy, this to be eligible for provincial subsidy.
1926	Do.	Do.	Do.	Do.	Do.	From the remission by the county of 50-75% of the urban municipality's proportion of the county road levy the cost of repairs on county roads within the municipality was to be deducted. The refund was eligible for provincial subsidy.
1927	Do.	Do.	Do.	Do.	Do.	Although a street in a non-separated urban municipality was not a part of the county road system, but formed an extension of it, the county undertook to construct a 20-ft. strip for which it could claim the provincial subsidy. Minister empowered to make agreement with urban municipality for construction of connecting link of a provincial highway.
1928	(b) 66 2/3 (max.) C, M 50 S 25 E	Do.	Do.	Do.	Do. 30 C, M, E (d) 80 C, M, E (c) 50 S	
1930	Do.	Do.	Do.	Do.	Do. 40 C, M, E (d) 80 C, M, E (c) 50 S	Power of Minister to make agreement for connecting link to provincial highway extended to cover construction, improvement, maintenance and repair but restricted to non-separated urban municipalities.

Table 4.1—Continued

Date	Colonization Roads (e)	Northern Development Roads	Provincial Highways	Provincial County Roads	County Roads	Township Roads	Urban Streets
1931	(b) 66 2/3 (max.) C, M 50 S, E	(a) 100 C, M, S, E (b) Less than 100% aid to municipalities.	80 C, M 100 S, E	Included in prov- incial highways.	50 C, M, S, E	40 C, M, E (d) 80 C, M, E (c) 50 S	
1935	Do.	Do.	100 C, M, S, E	Do.	Do.	Do.	Any cost-sharing agreement between a county and a non-separated urban municipality forming a basis of provincial subsidy must be approved by the Minister. For a connecting link in a provincial highway through a non-separated urban municipality the Province assumed, where the population was not more than 2500, the cost of a strip not wider than the provincial highway where it approached the urban municipality; for non-separated towns over 2500 in population, the Province assumed 50% of the cost of the work up to a width of 30 ft.
1937	(a) 100 C, M, S, E (b) 66 2/3 (max.) C, M (Normally, 50%) 50 S, E	(a) 100 C, M, S, E (b) Less than 100% (normally, 50%) aid to municipalities, including urban.	100 C, M, S, E	Included in prov- incial highways.	50 C, M, S, E	50 C, M, S, E (d) 80 C, M, E	

(a) In unorganized territory.

(b) In organized territory.

(c) Includes travelling expenses.

(d) Only under special circumstances.

(e) Grants for colonization roads only by specific vote of the Legislature.

4.10—Aid to Rural Highways by Urban Municipalities. As was pointed out in Art. 4.2, the advocates of good roads had persistently urged the justice of the urban municipalities contributing to the construction and maintenance of rural highways. The Public Roads and Highways Commission, 1914, stressed the obvious interest of the cities in rural roads radiating therefrom and in its recommendation of a \$30,000,000 construction programme, to be spread over a period of 15 years, it suggested that the cities contribute 20 per cent. of this amount.

In dealing with the establishing of suburban road systems the Ontario Highways Act, 1915,⁵⁰ provided that the city or town involved contribute 30 per cent. of the cost of construction and 40 per cent. of the cost of maintenance and repairs.

The 1919 amendments stipulated⁵¹ that for any suburban road that may have been designated as a provincial county road the city or town concerned should contribute 20 per cent. of the cost of both construction and maintenance.

In 1920,⁵² the city or town was required to contribute 30 per cent. of the costs of construction and maintenance, but with the proviso that the amount paid should not involve more than $\frac{1}{2}$ mill taxation on the rateable property of the municipality. However, any city or separated town might, by by-law, grant an amount equivalent to 2 mills on the rateable property if the county would contribute an equal amount.

Consequent upon the increased subsidy by the Province to county roads inaugurated in 1925, the Ontario Highways Act was amended⁵³ by providing that the expenditure on suburban roads outside the limits of the city or town concerned was to be borne, in respect of both construction and maintenance, in the ratio of 25 per cent. by the county, 25 per cent. by the city or town, and 50 per cent. by the Province.

4.11—Licensing of Motor Vehicles. Motor vehicles were first licensed in Ontario in 1903,⁵⁴ when a fee of \$2.00 was imposed for automobiles of all classes with a \$1.00 fee for renewal. No destination of the funds so collected was indicated in the statute.

From time to time the fee was increased and, in 1915, the principle of licensing motor vehicles for revenue appears to have been introduced. The fees in the case of passenger automobiles were made to range between \$6.00 and \$25.00, according to power, as compared with a former flat fee of \$4.00. In addition, a fee for commercial motor vehicles was imposed.

The first official mention of the use of licensing fees as a source of highway revenue was made in the 1920 amendments to the Highway Improvement Act,⁵⁵ whereby one of the credits to the Highway Improvement Fund was stated to be "a sum in every fiscal year equal to the gross receipts of the Province for motor vehicle permits and licences and all other sources of revenue under the Motor Vehicles Act, after deducting an amount sufficient for sinking fund and interest on any bonds issued."

Reference is made to the present schedule of licence fees for commercial vehicles in Chapt. VII.

⁵⁰S.O. 1915, c. 17.

⁵¹S.O. 1919, c. 19.

⁵²S.O. 1920, c. 22.

⁵³S.O. 1925, c. 26, s. 16(1).

⁵⁴S.O. 1903, c. 27, s. 2.

⁵⁵S.O. 1920, c. 20.

4.12—The Fuel Tax. Under the authority of the Gasoline Tax Act, 1925,⁵⁶ the Government of the Province took the highly important step of instituting a gasoline tax. The purpose of it was clearly indicated in Section 5 of that Act, which ran: "For the purpose of providing for a fair contribution by the users of roads in Ontario towards the cost of the construction and maintenance thereof, every purchaser shall pay to the Minister for the use of His Majesty in the right of the Province of Ontario, a charge or tax at the rate of three cents a gallon on all gasoline purchased or delivery of which is received by him." The 1926 amendments to the Highway Improvement Act⁵⁷ specified that one of the sources of the Highway Improvement Fund was to be a "sum equal to any revenue collected by the Province under the Gasoline Tax Act, 1925, and the regulations made thereunder."

In 1929 the tax was raised to five cents and in 1932 it was further increased to six cents, the present rate.

With the revision of The Gasoline Tax Act in 1936,⁵⁸ all references to the application of the tax to the construction and maintenance of highways was removed, notwithstanding that the Highway Improvement Fund has since 1926 included the gasoline tax as a source of revenue for highways. The Gasoline Tax Act is administered by the Department of Highways and refunds of the tax are made to all users of gasoline, as defined by the Act, for non-highway purposes according to regulations made under the Act.

Although many variations are to be found in the types of fuels now used for internal combustion engines, the tax is made to apply to all of them except kerosene or coal oil when not mixed or combined with other fuels.

Due to the need for distinguishing, in estimates of the cost of operation, between gasoline-propelled vehicles and those utilizing fuel oil, it has been found desirable in the present report to speak of the tax as the "fuel tax," since it is levied in equal measure on gasoline and on fuels that are not gasoline at all. There appears to be no present objection to this generalized term, since the Fuel Oil Tax Act of 1932 does not appear in the Revised Statutes of Ontario, 1937.

4.13—Federal Aid to Provincial Highways. *Canada Highways Act.* Partly in response to a general demand for improved highways and partly to increase the employment in civil occupations after the war, the Canada Highways Act, 1919,⁵⁹ authorized the expenditure of \$20,000,000 for the construction and improvement of highways in Canada. In accordance with that measure, the Dominion Government undertook to contribute 40 per cent. of the construction cost of the highways approved by it. The allocation to the Province of Ontario amounted to \$5,887,283 and the amount was received during the seven years, 1921-1927. This assistance encouraged the Province, in 1920, to raise its contribution to provincial highways from 70 per cent. to 80 per cent. of the cost.

Unemployment Relief. Up to March 31, 1937, the Dominion Government has contributed a total of \$19,863,899.66 for the relief of unemployment by the building of roads in the Province of Ontario under the supervision of the Ontario Government, and largely on the Trans-Canada Highway. The relation

⁵⁶S.O. 1925, c. 28.

⁵⁷S.O. 1926, c. 15, s. 10(d).

⁵⁸S.O. 1936, c. 25.

⁵⁹S.C. 1919, c. 54.

of this assistance to the cost of the highway system of the Province is discussed in Art. 12.8.

Grade Crossing Fund. Beginning in 1909, the Parliament of Canada made available from time to time substantial sums to be employed for the furtherance of safety at grade crossings. Up to the end of the calendar year 1937 expenditures made from this fund in Ontario amounted to \$4,625,259.97. With respect to crossings of highways under the jurisdiction of the Province the amount granted out of the fund to March 31, 1937, as shown in Table 12.1, was \$465,069.92.

SECTION 2—PHYSICAL DEVELOPMENT OF THE ROADS

4.14—Roads Prior to 1900. The standards of highway design and construction in Ontario prior to the beginning of the present century were essentially simple. While plank or corduroy roads had been employed on low or swampy land with some frequency in pioneer days, improvement of the travelled surface very largely came from the use of gravel or macadam. That this was often very poorly done will be seen from what follows.

The toll road companies, although offering the advantage of surfaced roads, were given to the slighting of maintenance, and complaints of road users were often voiced in this connection. As a result, agitation sprang up which ultimately led to the taking over of these roads by the municipalities.

Even as late as the turn of the century the roads were admittedly in very bad condition. For many years they had been neglected in favour of the railways and motor vehicles had not as yet forced a radical upward revision of construction standards.

A. W. Campbell observed in 1896⁶⁰ that the annual expenditure on the roads and streets in Ontario, amounting to millions of dollars, was in the greater part wasted in ill-contrived and temporary repairs needed to keep the roads in a passable condition. He failed to find any value in them to be passed on as a legacy from the past.

A year later he wrote:⁶¹ "It is doubtful if there is a mile of true macadam road in Ontario, outside of a few towns and cities. There are miles of roads which are covered with dirty gravel or rough broken stone, and are popularly supposed to be macadamized, but they more resemble the roads Macadam found in England three-quarters of a century ago, the kind he removed, rather than those he constructed."

In the same report he observes: "A century ago the roads of Ontario, such as existed, and they were very few, were mere trails. Today, notwithstanding the amount of money and labour placed on them, the majority are little better than trails From the middle of October until the end of December and from the first of March to the middle of May, a period of five months, by far the greatest part of the mileage of the Province is mud, ruts and pitchholes Of this period of five months there are at least two months of the year when the roads are practically impassable for loads. From the middle of November until the middle of December; from the middle of March until the middle of April, the agricultural trade of the country is practically cut off. For the remaining three months of the five the roads are barely passable."

As has already been noted elsewhere in this chapter, a strong movement

⁶⁰First Report of the Provincial Instructor in Road-Making, 1896, p. 12.

⁶¹Second Report of the Provincial Instructor in Road-Making, 1897, p. 9.

for betterment of the situation arose in the nineties and before many years the main roads of the Province had been put in a much more satisfactory condition. In any consideration of the matter of highway debt, however, it is important to note that with respect to any highway construction carried out before the turn of the century there could be but little highway "legacy from the past" to the present generation.

With the rapid development of motor traffic it was inevitable that a reappraisal of highway facilities offered in the Province and a reconsideration of standards of design and methods of construction would become necessary. The situation was clearly perceived by the Public Roads and Highways Commission, in 1914, as is evident from the following:⁶² ". . . from a strictly technical standpoint the art of road-making is in a state of transition. Until the advent of the high-powered motor car, that art had been fairly mastered; but the motor has created new difficulties which have to be studied, and a final solution of these has yet to be reached."

In reviewing the physical development of the highways of the Province up to the present, it will be convenient to consider them according to jurisdiction. Changes in design and construction practice will therefore be considered under the heads of County Roads, Township Roads, King's Highways, and Colonization and Northern Development Roads.

4.15—County Roads, 1901-1937. Like other highways, the county roads suffered from the common neglect accorded to the roads of the Province during the heyday of railway construction. Not until the passing of the Highway Improvement Act, in 1901, was there the necessary legislative incentive for improvement. Due to the necessity of having subsidized county roads conform to the standards of the Department of Public Works, the general character of the construction of roads throughout the counties improved, particularly after county road superintendents were appointed.

During the period 1915-1920 county roads were laid out with a top width of from 24 to 28 ft. with grades up to 8 per cent. Gravel and crushed stone were the materials chiefly used for surfacing, the consolidation of the surface being left to the traffic itself. Macadam was used for depths of stone that otherwise would have inconvenienced traffic. Up to 1920, bituminous and cement concrete county roads were not extensively constructed, the higher types of pavements being confined chiefly to towns and villages. Authentic records of what was actually done are not available.

Between 1920 and 1930 all the counties of the Province that had not previously done so adopted county road systems, which comprised some 15 per cent. of the total county road mileage, and included the main market roads leading to urban centres within the county and also those roads forming connecting links with the county road systems of the neighbouring counties.

In this period surfaces of gravel or stone roads were maintained by applications of bituminous materials with stone chips. Certain of the roads were improved by the mulch and retread methods and bituminous macadam and black base became common.

Cement concrete county roads were adopted with increasing frequency during these years, and while the early slabs were made of a uniform thickness of 8 or 9 in., in the later part of the period the slab was designed with edges thicker than the centre, and laid in widths of 10 to 20 ft. with transverse

⁶²Report of the Commission, p. 9.

expansion joints variously spaced. The 18 and 20-ft. widths were provided with a longitudinal expansion joint along the centre line of the pavement.

In the period of 1930 to 1937 the counties had in many instances completed programmes for road work on which they had been working since adopting the county road system. Because of this, their undertakings often took on the character of reconstruction, and presented the problem of improving and bringing the roads up to modern standards, while in the meantime salvaging as much as possible of the earlier work.

Gravel and crushed stone roads were constructed with more care than in the preceding period of ten years, always bearing in mind that such roads might at some time need to be reconstructed and that the present construction should form a suitable base for some other type of surfacing.

The construction of bituminous cement concrete roads continued to improve in quality in accordance with the development of the revised plans and specifications of the Department of Highways.

4.16—Township Roads, 1901-1937. In the early years of the century the incubus of statute labour still hung heavily over township roads and it was not until it was largely abolished that a notable improvement in standards occurred. Records of what was done are not available. Increasing traffic, particularly motor traffic, had made the situation acute and it was only on co-operation with the Department of Public Highways, which was incidentally necessary in order to enjoy the provincial subsidy, and the appointment of township road superintendents, that pronounced improvement set in.

In the period 1920 to 1930 township roads followed the natural ups and downs of the land on which the road was located. Heavy cuttings were in general avoided. Pit-run gravel, crushed gravel and crushed stone were employed on a very large percentage of such roads.

Bituminous surface treatments were given in certain instances and mulch, retread, penetration, mixed macadam and sheet asphalt were some of the types of bituminous pavements employed. These were not constructed on a large scale but were confined to sections of municipalities adjacent to large towns and cities or to industrial centres.

Cement concrete roads were not extensively built in the townships, but only in sections of municipalities where urban conditions existed. They were laid in widths of from 10 to 20 ft. and the cross-section of the concrete slab varied from a uniform thickness of 7 or 8 in. throughout to one having a thickness of 6 in. at the edges and 8½ in. at the centre.

Since 1930 a large percentage of the townships within the organized counties have carried out their road work activities in accordance with the provincial legislation and regulations pertaining thereto, thus receiving subsidies on the expenditure. The necessity of conforming to the departmental standards has had a most beneficial effect on the character of township road construction.

Bituminous and cement concrete pavements were not extensively built during the depression, but when adopted were similar to those built by the counties in the same period.

4.17—King's Highways, 1917-1937. Following the establishment of the provincial highway system, in 1917, there was at first very little change in location of the highways assumed. Pit-run gravel was applied in the construction of gravel roads and up to 1920 the only hard surfacing was some water-bound macadam consisting of 7½ in. of loose stone consolidated to 5 in.

It should be pointed out that during the period 1915-1917 the Toronto-Hamilton highway was constructed, employing a concrete slab 18 ft. wide with a thickness of 6 in. at the edges and $8\frac{1}{2}$ in. at the centre.

From 1921 to 1925 the standard for the provincial highways was improved by setting a maximum gradient of 5 per cent. and a maximum curvature of 8 deg., the width of the road grading remaining at 30 ft. A considerable mileage of bituminous and concrete pavements was constructed, all to a width of 20 ft., the concrete pavements having a thickness of 6 in. at the edges and $8\frac{1}{2}$ in. at the centres, with no longitudinal joints. Pit-run gravel was still used for the construction of gravel roads.

In the period 1926 to 1930 standards were again raised to a maximum gradient of 5 per cent. and a maximum curvature of 6 deg. For the heavier travelled roads the width of road grade was increased to 40 ft. The cross-section of concrete pavements remained as before, but a longitudinal expansion joint was introduced. Asphaltic concrete of either macadam or concrete base was abandoned in favour of mixed macadam or black base. Penetration pavements remained as before. Pit-run gravel was abandoned in favour of crushed gravel.

From 1931 to 1935 more attention was given to location, but gradients and curvatures remained practically as before, as did the width of grading on major roads. Concrete pavements were redesigned, making them 10 in. thick at the edges and 7 in. in the central portion. Such pavements were laid in 10-ft. strips and considerably more reinforcement steel than had formerly been used was placed in the slab at the top with the intention of counteracting the hair cracking which developed in the earlier types of pavement. More attention was given to preparation of the subgrade by the use of longitudinal tile and strengthening with sounder material where required.

There was no change in the design of bituminous pavements, either black base or penetration.

In 1936 and 1937 new standards of road construction were adopted and roads laid out in various classes. These were: trunk roads, consisting of two 20-ft. pavements divided by a boulevard and paved with concrete; class A roads, graded to 40 ft. in width with 20 ft. of pavement; class B roads, graded to 30 ft. in width with 20 ft. of road surface; class C roads, graded to 24 ft. with 16 ft. of road surface, these roads being surfaced only with gravel. Trunk roads were required to have a minimum visibility distance of 700 ft., a maximum gradient of 4 per cent. and a maximum curvature of 3 deg. The standards in these respects were relaxed for the lower classes of roads.

While there has been no change in the cross-section of concrete pavement during the two years mentioned, a layer of gravel 6 in. thick or more is now placed from shoulder to shoulder underneath the pavement and in addition tile drains are run through all cuts, the trenches being filled to the top with porous backfill. Curbs, gutters and storm sewers are installed on fills and other places where required. The development of the standard concrete pavement for provincial highways from 1922 to 1937 is shown in Fig. 1.

Mixed macadam or black base standards have been changed so that now a 6-in. layer of gravel or more is placed from shoulder to shoulder. There has been no change in design of penetration pavements nor in the specifications for gravel roads. Neither has there been any change in the cross-section of the concrete pavement.

4.18—Colonization and Northern Development Roads. Prior to 1915 the standards followed in the construction of Colonization and Northern Development roads were comparable to those used for the townships in the organized counties of the Province. All road work carried out in this period was done in short stretches by hand labour and was restricted to construction in the vicinity of settled communities. The roads had a maximum width of 16 ft.

Between 1920 and 1925 the work in connection with Northern roads consisted of the construction of connecting roads between the various settled communities. They were narrow and followed the contour of the ground. Secondary roads were about 12 ft. wide and surfaced with gravel, while the settlers' roads were constructed to approximately the same width but with dirt surfaces. The limited funds available did not make it possible to give much attention to matters of alignment and curvature and the actual standard was practically left in the hands of the various engineers in charge of the work.

In the period 1926-1930 trunk roads were increased in width to 24 ft. and more attention was given to gradients and curvatures. In one or two of the districts penetration and retread pavements were constructed of a light type, generally 3 ins. in thickness. Secondary roads were improved and more gravel was applied to them. The settlers' roads in many cases were given a gravel surfacing.

In the year 1926 the Ferguson Highway between North Bay and Timmins was completed, giving the North access to the South by motor car. This road was 24 ft. in width and surfaced with gravel.

The 24-ft. gravel-surfaced road between Cochrane and Kapuskasing was completed in 1930 as a continuation of the Ferguson Highway. At this time secondary roads, now considered as feeders to the main roads, were increased to 18 ft. in width and generally gravel surfaced, while at the same time the settlers' roads were further improved.

In 1930 the Trans-Canada Highway was commenced with a 30-ft. width of travelled roadway, a maximum curvature of 6 deg. and 500 ft. of visibility distance on hills.

By 1935 the trunk roads were practically all of gravel and in most cases were widened out to 30 ft. Alignment and curvature were improved and additional retread pavement was laid. The secondary roads were also improved, and more roads of a better type were built for settlers.

Upon the taking over of the administration of Northern Development by the Department of Highways, in 1936, the standard of construction was raised to that followed in Southern Ontario. It was realized that what had been found sufficient in the earlier years was inadequate to care for the increased automobile traffic. Grades were improved on the King's Highways, the road bed was widened to 40 ft. and the visibility distance increased to 700 ft. Secondary or feeder roads were improved concurrently with the King's Highways.

4.19—Total Mileage of Highways in Ontario. The total mileage of highways of different classes in Ontario at the close of the year 1937, based on information supplied to the Commission,⁶³ is shown in Table 4.2. While some changes have since occurred they are of minor importance. Urban streets are not included.

⁶³Exhibit No. 65.

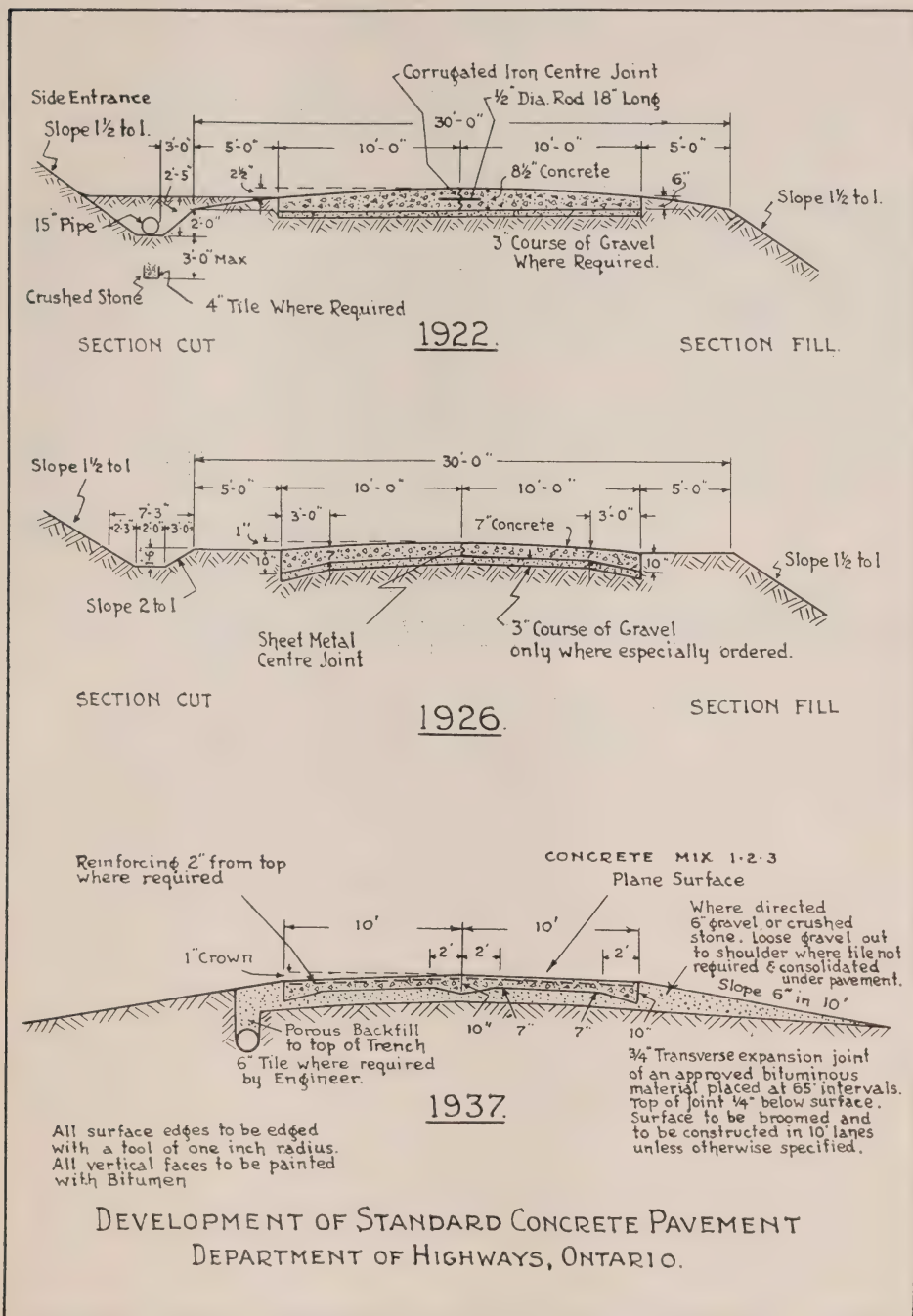


FIG. 1—Development of Standard Concrete Pavement,
Department of Highways, Ontario.

**Table 4.2—Mileages of Ontario Highways of Various Types
at the End of 1937^(a)**

Type of Road (1)	King's Highways (2)	County Road Systems ^(b) (3)	Township Road Systems ^(c) (4)	Northern Development Roads (5)	Totals (6)
Concrete	1,667.0	...	...	...	1,667.0
Asphalt	951.0	...	...	...	951.0
Retread and mulch	333.0	...	...	...	333.0
Penetration	331.0	...	...	...	331.0
Waterbound macadam	194.0	...	...	...	194.0
Gravel and grading	3,701.0	...	...	...	3,701.0
Earth .....	...	175.9	14,604.1	...	14,780.0
Gravel or stone .....	...	6,018.1	26,553.4	...	32,571.5
Surface-treated macadam..	...	967.4	127.7	...	1,095.1
Bituminous macadam ....	...	514.9	23.3	...	538.2
Asphaltic macadam .....	...	356.9	92.4	...	449.3
Cement concrete .....	...	273.1	44.1	...	317.2
Graded .....	...	...	...	3,589.0	3,589.0
Gravelled .....	...	...	...	9,846.0	9,846.0
Totals	7,177.0	8,306.3	41,445.0	13,435.0	70,363.3

(a) Based on replies to questionnaire furnished by the Department of Highways (Exhibit No. 65).

(b) For the 37 organized counties at the end of 1936.

(c) For the townships in the 37 organized counties at the end of 1936.

CHAPTER V

DEVELOPMENT OF COMMERCIAL MOTOR TRANSPORT IN ONTARIO

5.1—Evolution of Land Transport in Ontario. As has already been pointed out in Chapt. IV, the development of transportation in Ontario during the early years of settlement took the form of providing highways as feeders to the waterways, which constituted a ready-made long distance means of communication. In spite of the difficulties of construction and maintenance, there were by 1841 some 6000 miles of post roads in the Province, on most of which regular stage coach routes were operated and on which a measure of land haulage of freight was conducted.

With the coming of the railways, in the early fifties, the transportation of both passengers and freight for long distances overland was transferred to them and the highways became once more merely a feeder system. For some sixty years the steam railways maintained their place as the principal carrier of both freight and passengers, disturbed only during the later years of the period by the interurban electric railways.

Not long after the introduction of motor vehicles, in the early years of this century, the diversion of local transportation to them set in and with constantly increasing severity the competition with the railways has developed over the last thirty years.

Pronounced attention was drawn to the possibilities of motor truck haulage during the war. The railways of the United States experienced great difficulty in moving vast quantities of freight with the desired rapidity and resort was had to motor trucks to relieve the congestion. It was soon found that this form of transport had striking possibilities, not only in the United States but in Canada as well, and thereafter the transportation of goods by motor truck grew apace.

Public interest in the passenger motor car very soon gave rise to a general desire to "ride on rubber." It is not surprising, therefore, that many services of a rudimentary character, involving the use of ordinary motor cars as "jitneys," sprang up during the war. Ignorance of the operators as to what constituted true cost, combined with unreliability of the equipment and particularly the pressure of legal restrictions, resulted in the rapid disappearance of these poorly-founded operations. In their stead came operators with improved equipment and the prerequisite appreciation of business essentials. After the close of the war the modern coach company made its appearance with an ever-increasing participation in the transportation of passengers in the Province.

Change in the character of the public demand resulted in the virtual disappearance of the interurban electric railways from the transportation field. Their owners found themselves unable to compete with the increasingly popular private passenger car and most of them lost almost their entire investment. Constant improvement of the highways of the Province rendered the motor coach the logical successor of the interurban electric railway and the result has been the development of a reliable and carefully-regulated system of highway passenger transportation for hire utilizing the facilities so provided by the Government and the municipalities.

Table 5.1—Registration of Motor Vehicles in Ontario, 1903 to 1937, Inclusive

Note: Convertibles, or two-purpose cars, and buses not licensed as Public Vehicles are included in Private Commercial Motor Vehicles.

Year (1)	Passenger Cars (2)	Private Commercial Motor Vehicles (3)	Private Commercial Trailers (4)	Total Private Commercial Vehicles (5)	Public Commercial Motor Vehicles (6)	Public Commercial Trailers (7)	Total Public Commercial Vehicles (8)	Public Buses (9)	Motor Cycles (10)	Total Commercial Vehicles (11)	Total Motor Vehicles (12)
1903	220	...	...	...	...	...	...	...	...	...	220
1904	535	...	...	...	...	...	...	...	...	...	535
1905	553	...	...	...	...	...	...	...	...	...	553
1906	1,176	...	...	...	...	...	...	...	...	...	1,176
1907	1,530	...	...	...	...	...	...	...	...	...	1,530
1908	1,754	...	...	...	...	...	...	...	...	...	1,754
1909	2,452	...	...	...	...	...	...	...	...	...	2,452
1910	4,230	...	...	...	...	...	...	...	...	...	4,230
1911	11,339	...	...	...	...	...	...	...	...	...	11,339
1912	16,268	...	...	...	...	...	...	...	1,754	...	18,022
1913	23,700	...	...	...	...	...	...	...	2,900	...	26,600
1914	31,724	...	...	...	...	...	...	...	3,633	...	35,357
1915	42,346	...	...	...	...	...	...	...	4,174	...	46,520
1916	51,326	2,618	...	2,618	...	...	...	...	4,287	2,618	58,231
1917	78,861	4,929	...	4,929	...	...	...	...	5,180	4,929	88,970
1918	101,845	7,529	...	7,529	...	...	...	...	5,002	7,529	114,376
1919	127,860	11,428	...	11,428	...	...	...	...	5,516	11,428	144,804
1920	155,861	16,204	...	16,204	...	...	...	...	5,496	16,204	177,561
1921	181,978	19,554	...	19,554	...	...	...	...	4,989	19,881	206,848
1922	210,333	24,164	327	24,627	...	...	...	...	4,799	24,627	239,759
1923	245,815	28,612	591	29,203	...	...	...	...	4,325	29,203	279,343
1924	271,341	31,386	778	32,164	...	...	...	102	3,941	32,266	307,548
1925	303,756	34,474	1,058	35,532	...	...	...	216	3,748	35,748	343,232
1926	343,992	38,628	1,398	40,026	...	...	...	384	3,345	40,410	387,747
1927	386,903	42,962	1,962	44,924	...	...	...	480	3,159	45,404	435,466
1928	429,426	47,046	3,196	50,242	848	85	933	522	3,197	51,697	484,320
1929	473,222	53,718	4,698	58,416	913	205	1,118	587	3,541	60,121	536,884
1930	490,906	60,113	6,890	67,003	934	221	1,155	643	3,924	68,801	563,631
1931	489,713	60,565	9,161	69,726	3,062	835	3,897	629	4,070	74,252	568,035
1932	462,923	57,880	12,492	70,372	2,877	506	3,383	590	4,088	74,345	541,356
1933	453,314	55,965	15,379	71,344	3,301	932	4,233	494	4,370	76,071	533,755
1934	470,617	60,761	18,949	79,710	3,162	922	4,084	513	4,468	84,307	559,392
1935	489,610	63,316	23,072	86,388	3,677	1,160	4,837	597	4,506	91,822	585,938
1936	514,211	64,989	26,725	91,714	5,037	1,205	6,242	667	4,553	98,623	617,387
1937	541,802	71,280	30,379	101,659	5,500	1,392	6,892	754	4,582	109,305	655,689

5.2—Highway Facilities Promoted by Motorists. On its first appearance in Ontario, the automobile was considered as pre-eminently a pleasure vehicle. Nevertheless, its satisfactory operation and the justification for its ownership rested largely on the availability of hard-surfaced and relatively expensive roads.

With a view to obtaining facilities of this kind, motorists supplemented governmental activities by a sustained agitation for better roads. They raised no objection to paying a tax for the maintenance of the roads, as was then being done in some of the States of the American Union. Seeking aid wherever it might be found, they urged the farmer to utilize the motor car both for profit and as an aid to comfortable living, admitting that when he began to use it and realized its advantages the good roads movement would experience a tremendous surge forward.¹

The propagandists did not have an easy task. Much opposition was encountered from the farmers whose horses were frightened by the appearance of these disturbing vehicles and whose roads were transformed to clouds of dust. The point of view of the farmers was well put by W. H. Pugsley, at that time President of the Ontario Good Roads Association, thus:² "One of the greatest obstacles in the way of persuading the farmers to undertake the betterment of the roads is the automobile. The farmer's argument is 'If we make a good road it will be immediately monopolized by the automobiles and we ourselves will have to take the back roads.' "

The campaign succeeded, however, and it is fair to state that the initial pressure for good roads came from private motorists largely bent on pleasure rather than from the owners of commercial motor vehicles. That was to come later.

In the extension of the use of motor vehicles and the concurrent improvement of the highways, much of the urge has come from the manufacturers of equipment. There is some evidence that at times it may have been unduly great. Mr. Joseph B. Eastman, of the Interstate Commerce Commission of the United States, has expressed the view that: "Motor truck opinion has been shaped too much by those who build trucks rather than by those who operate them."³

5.3—Beginning of Commercial Motor Transport. The conception of commercial haulage of freight over the highways of Ontario did not originate with the invention of the motor car. A. W. Campbell remarked, in 1899:⁴ "A number of Hamilton and Toronto merchants and manufacturers . . . have established a freight wagon service between the two cities, a distance of forty miles, in competition with railway rates, resulting in a saving of seven or eight cents per hundred on the freight carried. That this can be accomplished on the highway traversed, which is no better than the average bad road, would seem to be proof conclusive that the common roads offer advantages which have been overlooked."

Ten years later he remarked:⁵ "Signs are not lacking that in the near future motor vehicles, adapted to the carrying of farm produce rapidly and

¹Canadian Engineer, March 11, 1910, p. 218, and March 2, 1911, p. 361.

²Canadian Engineer, March 11, 1910, p. 216.

³Eighth Annual Meeting of the National Association of Motor Bus Operators, September 21-22, 1934.

⁴Fourth Report of the Provincial Instructor in Road-Making, 1899, p. 7.

⁵Thirteenth Annual Report on Highway Improvement, 1909, p. 10.

long distances will be available. With roads equal to the weight and speed of such a means of transportation, the possibilities as regards farming are tremendous. But a necessary condition of the efficiency of such a vehicle is better roads."

Examination of the public pronouncements on the subject in the early years of this century indicates common agreement that a prerequisite of successful commercial motor transport on the highways was hard-surfaced roads that could be utilized in bad weather as well as in good—a need more imperative for such purposes than for pleasure traffic, in that the element of economic necessity existed.

5.4—Growth in Registration of Motor Vehicles. Registration of motor vehicles in Ontario was authorized in 1903, but the first available figures for a complete year are for 1904. Not until 1916 was there any distinction made between the registration of passenger automobiles and commercial motor vehicles.

The growth of registration of the more important classes of motor vehicles is shown in Table 5.1 and graphically in Fig. 2. For the sake of convenience the term "private commercial vehicle" has been applied to all commercial freight vehicles not operating for hire and not merely to certain commercial freight vehicles having a gross weight of 6000 pounds or more and not operating for hire. Throughout the proceedings of the Commission the term was used in its wider significance and this is adopted here and elsewhere in this report.

The upper curve of Fig. 2 indicates the growth in annual registration of motor vehicles of all classes, including motorcycles, from 1904 to 1937, inclusive. From a total registration of 535 in 1904 the numbers have risen to 655,689 in 1937. In 1916 the total registration was 58,321 and from that year until 1937 the numbers of registered vehicles have multiplied 11.25 times. While a sharp recession occurred for the years 1932 and 1933, the strong upward trend has been resumed, the rate of increase being approximately the same as existed before the depression. At the present time the increase in total registration is about 31,000 vehicles per annum.

It is obvious from the diagram that passenger motor cars made up by far the largest portion of the registration and that the trend of the total registration curve is closely similar to the curve for passenger cars alone.

The curves for other classes of motor vehicles, shown at the lower right hand corner of the figure, indicate definite upward trends but, by reason of the much smaller numbers of these vehicles, the curves for them are preferably plotted to a much larger vertical scale. This has been done in Fig. 5, which relates only to commercial motor vehicles.

The upper curve of Fig. 3 indicates that the registration of all commercial motor vehicles, for hire or not for hire, and including trailers and buses, has risen continuously since 1916, although for the year 1932 the registration was practically same as for 1931. From a total of 2,618 in 1916, when commercial motor vehicles were first distinguished from passenger cars, the numbers have risen to 107,458 in 1937, that is, they have multiplied 41 times. Comparing this with the corresponding multiplication of 11.25 times noted for all motor vehicles, it is obvious that vehicles of the commercial types have increased at a much more rapid rate than have motor vehicles generally.

It is further apparent from Fig. 3, on examination of the second curve from the top, that commercial motor vehicles and trailers not for hire make up by far the greatest part of the total commercial registration. In 1937 these

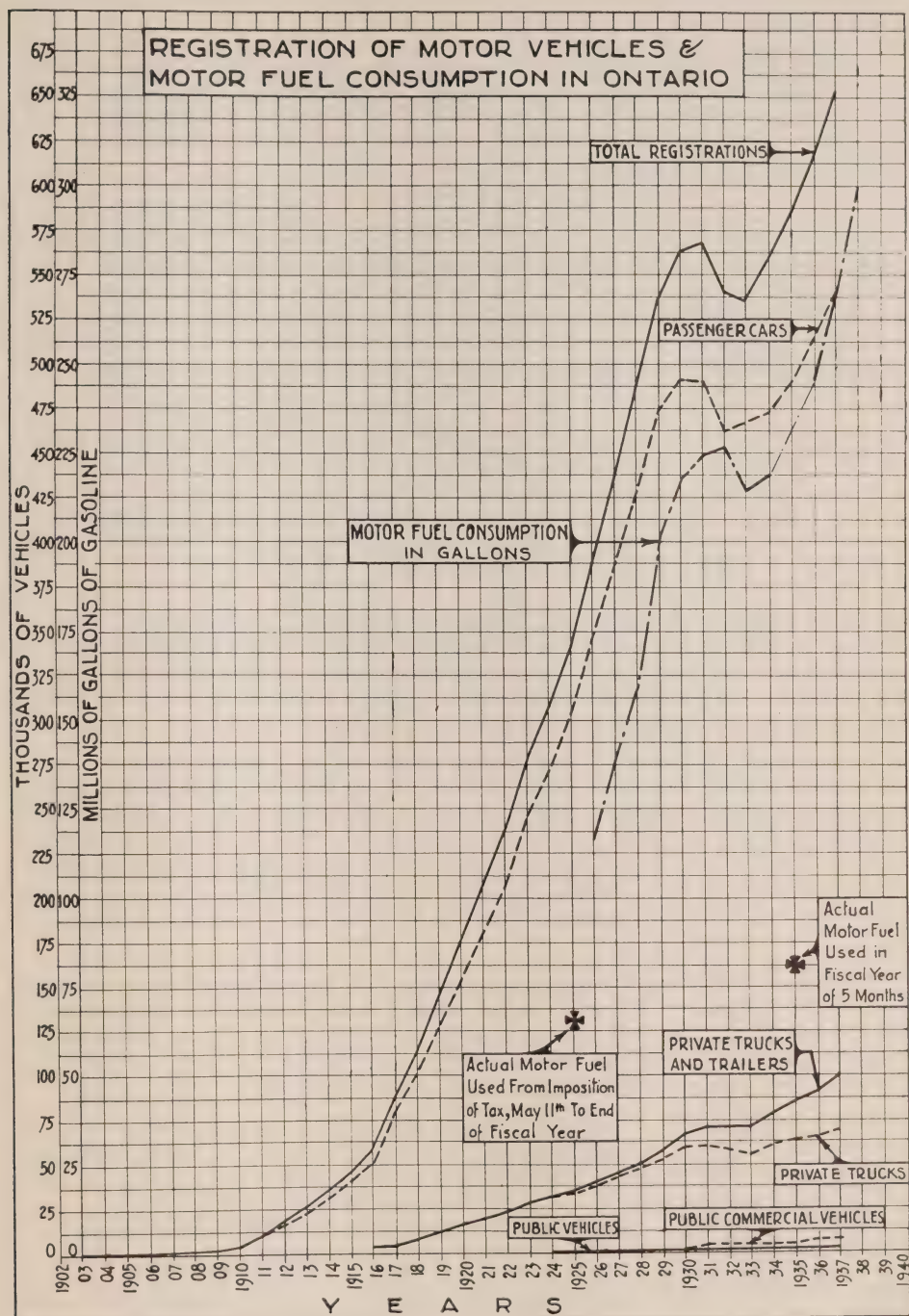


FIG. 2—Registration of Motor Vehicles and Amount of Motor Fuel Consumption in Ontario.

vehicles constituted 93.5 per cent. of the total truck and trailer registration in the Province.

While power units, that is, trucks and tractors, are much more numerous than trailers, the recession in the number of power units that occurred in the years 1932 and 1933, was not accompanied by a recession in commercial freight vehicles as a whole. With a view to economy, relatively more trailers were hauled per power unit during the recession than before.

On account of the large numbers and relative importance of the low-capacity private commercial vehicles, the diagram has been made to include a curve showing the total private commercial vehicle registration for vehicles with a gross weight of six thousand pounds or under and a corresponding curve for private commercial power units with the same gross weight, beginning with the year 1928, which was the first year for which the segregation became possible. Here again, while a recession occurred for the power units in the years 1931 and 1932, there was no recession for light private commercial vehicles generally.

The obviously small number of public commercial vehicles, that is freight vehicles operating for hire, is indicated at the bottom right hand corner of Fig. 3. Such vehicles, including their trailers, constituted only 6.5 per cent. of the total registration of commercial freight vehicles in the Province for the year 1937. The still smaller numbers of public vehicles, that is buses operating for hire, is indicated also in the lower portion of Fig. 3.

5.5—Growth of the Motor Transport Business. The business of transporting freight and passengers by motor vehicle appears to have grown in approximate conformity with the registration of commercial motor vehicles in the Province. A conception of this development may consequently be gained by an examination of the diagrams that have preceded.

From small beginnings, which date approximately from the war period, the numbers of operators of motor vehicles transporting freight for hire have increased so that at October 31, 1937, there were 2998 operators owning 6570 vehicles licensed as public commercial vehicles. The classification of such vehicles is indicated in Art. 7.7. Class "A" carriers, that is common carriers operating on the King's Highways, have so increased that there are now some 250 operators, operating more than 400 routes and approximately 44,000 route miles⁶.

The length of freight movements has steadily increased. Whereas a dozen years ago a distance of 100 miles was regarded as the economical range of motor truck operations, there are now, advisedly or not, routes of over 400 miles in regular operation. Contract carrier movements in the Province of 500 miles and furniture movements of 700 miles are not uncommon.

The growth in certain types of haulage has been amazing. One of these, particularly suited to motor transport, is the handling of live stock. Statistics furnished by the Union Stock Yards of Toronto⁷ show that, whereas in 1918 1.76 per cent of the receipts of live stock were by truck, in 1937 51.09 per cent. of the receipts were by this form of transportation. In the latter year 62 per cent. of all calves and 73 per cent. of all hogs were received by motor truck.

Common carrier bus operations over extra-urban roads were first licensed in 1923, when the Public Vehicle Act was first passed. Since then, passenger

⁶Brief of the Automotive Transport Association of Ontario, February 23, 1938, p. 9.

⁷*Ibid.*, p. 8.

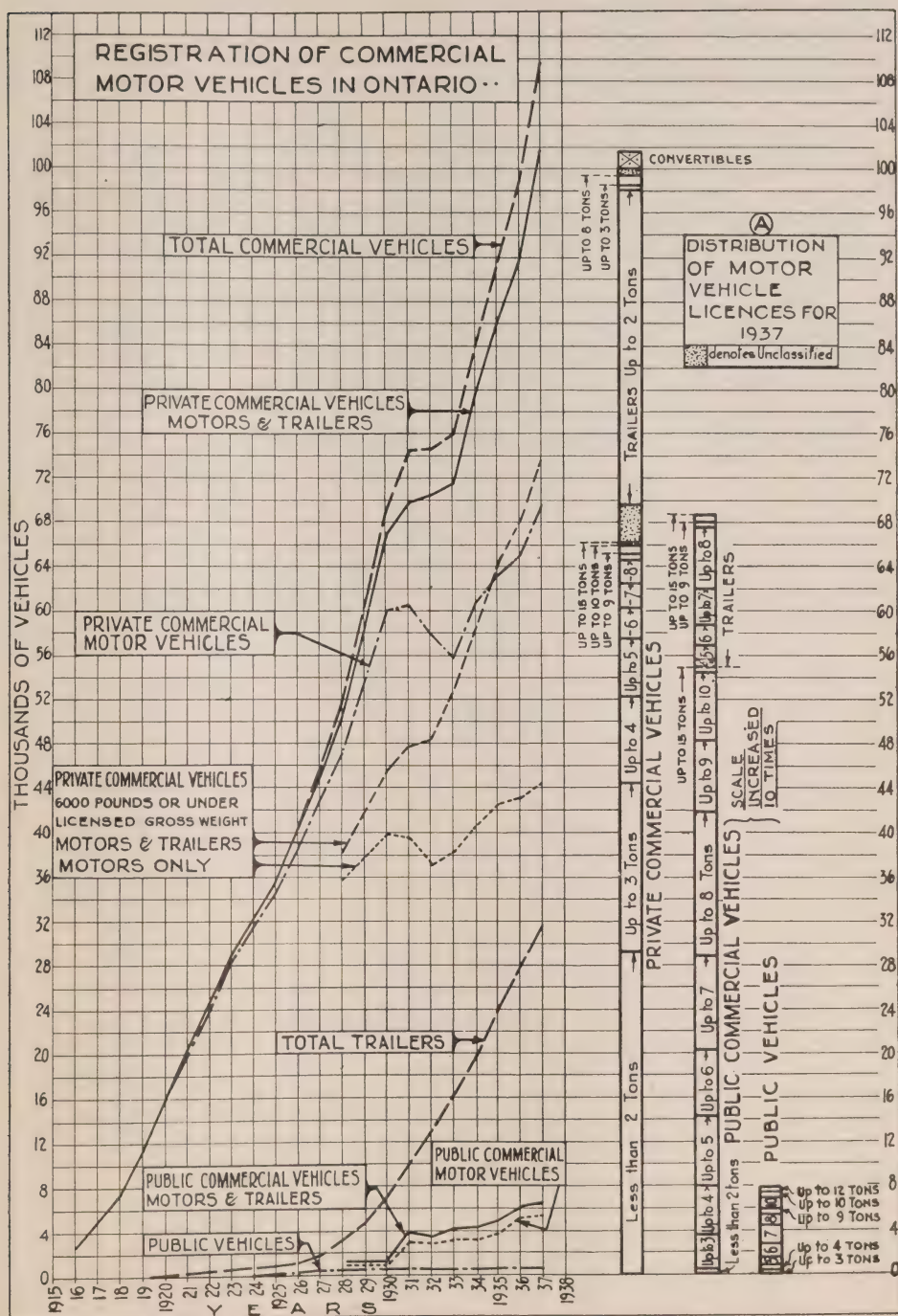


FIG. 3—Registration of Commercial Motor Vehicles in Ontario.

transportation by motor bus or coach has developed amazingly. Due to the boldness of many individuals and organizations with little capital, there were at first large numbers of independent companies attempting to carry on passenger transport over the highways. By 1927 eighteen independent motor bus lines were operating into the heart of Toronto, moving three million passengers per year over the city streets⁸.

Business necessity and the pressure of the public interest, aided by governmental action, caused the gradual amalgamation of many of these companies. Gray Coach Lines, Ltd., has purchased in all ten companies and similar combinations have occurred elsewhere, with the result that the number of operators of buses had been reduced to 117 by the end of the financial year 1937.

From information supplied to the Commission⁹, it appears that there are some 5700 route miles being operated by buses or coaches in the Province and that during the year 1937 some fifteen million coach miles were operated and approximately twelve million passengers transported.

⁸Brief of Gray Coach Lines, Ltd., p. 5.

⁹Brief of the Ontario Association of Motor Coach Operators, p. 2.

CHAPTER VI

HOURS, WAGES AND BENEFITS

SECTION 1—GENERAL

6.1—Irregular Hours Inherent in the Transport Industry. It was recognized and acknowledged by all those who appeared before the Commission, or who made written submissions to it, that irregular hours are inherent in the transport industry and that occasions will arise when men must remain on duty for longer periods than are prescribed in the normal operating schedules. At certain times of the year, or for special operations, as in long-distance moving, or the transport of valuable or perishable cargoes, or in situations arising out of accident or emergency, a departure from the tour of duty ordinarily established may be warranted. Vitally dependent as the world is on quick and efficient transportation, it is to be expected that these unusual demands will continue to arise, perhaps with increasing frequency.

General speeding up of the tempo of business and the desire of the merchant to carry the smallest possible inventory, have contributed to the irregularity of the hours worked by employees of the motor trucking organizations. One of the chief factors permitting truckers to compete successfully with the railways is the meeting of the wishes of the shipping public by accepting freight at almost any time and making deliveries at the earliest possible moment.

The exactions imposed upon the packing industry in this regard are characteristic. Dealers from all over the Province telephone or telegraph to the packing houses as late as ten o'clock at night and expect the orders to be at their stores next morning by eight or nine o'clock. The largest percentage of the business of one large packing house is packed and loaded after five p.m.¹.

It is manifestly not expedient to deprive the shipper of this class of service, or the trucker from providing it, but the condition that exists undoubtedly adds to the difficulty of maintaining reasonable hours of service for motor trucking employees.

SECTION 2—WORKING CONDITIONS IN THE MOTOR TRUCKING INDUSTRY

6.2—General Situation. While giving full recognition to the need for allowing some latitude in the matter of working hours in the motor trucking industry, the Commission finds that in many instances men have been asked or permitted to remain on duty for excessively long periods. In many cases, too, the wages paid have been out of all proportion to the hours worked or to the responsibility of the driver for either the safety of the public or the value of the equipment and cargo in his care.

On the other hand, the evidence shows that both in public commercial vehicle operations and in private trucking there are many instances of fair and reasonable treatment of employees, often in spite of adverse financial circumstances. During the period 1930-32, before drastic rate-cutting seriously affected their ability to pay, operators were paying their drivers in Western Ontario

¹Evidence, p. 5709.

from \$35 to \$45 per week for reasonable services, but, in general, they now find it impracticable to pay more than \$15 to \$33². In many instances operators stated in evidence that they recognized the inadequacy of the wages paid and wished to restore them to something more nearly approaching the old level, but were not financially able to do so.

The Commission soon discovered that the situation was incompletely disclosed by formal statements concerning the average level of working hours and wages in the motor trucking industry. Cross-examination speedily revealed the fact that there were many cases in which hours and wages were so far removed from the average as to constitute a genuine cause for public concern.

Characteristic instances of both good and bad working conditions in motor trucking operations are to be found in Arts. 6.4 and 6.5 and Appendix A6.

6.3—Causes of Long Hours and Low Wages. The existing condition of long hours and low wages in the motor trucking industry in Ontario has, in the opinion of the Commission, arisen from two major factors, both emanating from the depression. These are, first, the over-crowding of the field by licensed operators, resulting in uneconomic competition for the available business; and, second, the overstocking of the labour market, with inevitable competition for employment at almost any wages. To these primary factors may be added the lure of a new industry that can be entered upon with a minimum of capital and no specialized training or skill—an industry which to the man on the street, unacquainted with other than the most elemental aspects of the transport business, appears to be a very profitable one. There is, too, the compelling urge to “ride on rubber” and to “go places,” that gives to the driving of a truck a greater appeal, irrespective of hours, than does work on a farm or in a factory.

In order that the truck may maintain its superior adaptability for certain classes of haulage it is imperative that delays and holdovers be eliminated. It must travel as soon as the freight is ready to move. In the present-day industrial and commercial world, deliveries of goods inbound are wanted early in the business day, while shipment of outbound goods is made as late in the afternoon as is possible, or even at night. Pick-up and delivery of freight is spread over a long day, while movement of inter-city freight in substantial amount takes place at night. The economic range of the truck has a direct relationship to the hours that a driver is able to drive, and the time within which a return trip can be accomplished.

There is a monetary urge, short-sighted but real, for operators to work their drivers up to the limit of their physical ability and a more pardonable urge on the part of the men to earn as much as possible in the only way immediately open to them to do so. Under such circumstances, it is not surprising that working hours readily tend to become unduly long.

In for-hire operations, long hours and low wages naturally follow in the wake of low haulage rates. Many more examples of unsatisfactory working conditions for employees were cited for Eastern Ontario in evidence than for Western Ontario and the cause is not far to seek. Examination of the pro bills of the various trucking companies indicated definitely that for the same commodity and the same haulage distance the rates are lower in the Eastern part of the Province than in the Western part.

Wages may be relatively low and hours long in one area as compared with another by reason of the labour conditions in adjacent territory. The more favourable condition in Western Ontario, so far as labour is concerned, is doubt-

²Evidence, pp. 952-56.

less due in large measure to the propinquity of the high-wage standards of highly motorized Michigan on the one hand, and the low-wage standards in the Province of Quebec, on the other. The evidence of those operating into both the latter Province and New York State clearly indicated the disparity that exists at these extremes. While the average rate for drivers in Ontario at the time under consideration was \$3.53 per day, the rate in New York State was \$5.20 to \$6.00 per day. Other evidence revealed the fact that for long-distance moving vans operating into the States, a ten per cent. increase on the drivers' wages paid in Ontario, must be granted to the drivers while in the United States.

Another circumstance tending to long hours is the desire of drivers on "turn-around" runs to return to their home terminal at night, or after a moderate amount of rest. Due to the frequent need of waiting for a cargo at the far terminal, a badly "split" day may result, involving eight or ten hours of driving in a spread of ten to thirteen hours. The one-way drive at regular rates may not yield an adequate day's pay for the driver and the employer is not likely to be averse to the quicker service provided by a return trip in one day.

Where the driver is operating on a trip basis he may be held a long time at his own expense due to breakdowns or to the necessity of waiting for the arrival of a connecting transport. Instances of such delays amounting to from one to two days were cited in evidence ³.

6.4—Hours and Wages in the Operation of Public Commercial Vehicles.

General. During the public hearings many cases of unreasonably long hours and low wages in the haulage of freight by motor truck for gain were brought to the attention of the Commission. The evidence by no means indicated, however, that objectionable labour conditions characterized all operations of this class. Instances of reasonable hours and fair wages were not lacking, despite the financial difficulties that have descended upon most public commercial vehicle operators as a result of cut-throat competition.

Consideration of the evidence shows that the conditions complained of by employees of motor trucking operators arise with particular frequency in the case of Class D, or contract, carriers. This is not surprising, since freedom from the necessity of maintaining a regular freight service in contract operations attracts the operator of small financial resources. Very long hours, wages as low as \$10 a week and unsafe equipment are found to characterize such operations⁴.

Allusions were also made in evidence to the twin evils of excessively long hours and low wages in the operation of Class E, milk and cream carriers, and Class F, carriers of live stock, construction materials, coal and lumber⁵. It was not found practicable to hear oral testimony from actual operators in these classes.

In motor trucking operations the demands upon the employee may become onerous through (a) too many hours of work in any 24 hours, (b) too many working hours in a week and (c) badly-split days.

Hours of Highway Drivers. Extended periods of driving on the highway without substantial rest may arise from operating on a particularly long route, as from Toronto to Montreal, or from the effort to move very large quantities of freight over moderate distances in a restricted time, as in the movement of fruit or canned goods in the busy season.

³Evidence, pp. 958, 959a.

⁴Evidence, pp. 962-69.

⁵Evidence, p. 913.

While Section 18 of the Regulations Respecting the Licensing of Public Commercial Vehicles, dated February 22, 1936, prohibits any one from driving or being on any public commercial vehicle in any capacity for more than ten hours in any twenty-four hour period, there were many instances cited in evidence of hours so spent in excess of this maximum.

It being impracticable to inquire into the labour conditions attending the operations of any large proportion of the three thousand P.C.V. operators in the Province, the study of the activities of this class of carrier had to be restricted to 46 motor trucking organizations. Due to the incompleteness of the records of many of the operators and the lack of oral evidence from others, it was difficult to establish all of the facts, but in spite of this it is believed that the study which had necessarily to be made on the sampling basis has disclosed a situation characteristic of the industry as a whole.

Time books and records submitted by many of the operators and examined by the Commission revealed many instances of highway drivers of P.C.V. vehicles being on duty for 11 to 14 hours, and in some cases considerably longer. It is not practicable to report these observations completely, but Table A6.1, of Appendix A-VI, contains typical, and by no means exhaustive, labour facts pertaining to the businesses of eighteen representative operators from whom information in some detail was available.

A casual examination of this sampling table shows 24 instances of drivers on tours of duty ranging from 11 hrs. to as much as $24\frac{1}{4}$ hrs. in the case of one driver working for Employer No. 7. Duty periods of 11 hrs. are specifically shown for six operators; of 12 to 14 hrs. for eleven operators; and of 15 to $24\frac{1}{4}$ hrs. for seven operators. While some of the longer periods of duty are not regularly recurrent, the time records of the operators involved reveal many more instances of similarly excessive hours. Regular duty periods of 11 to 13 hrs. were admitted in evidence as involved in a considerable number of operations, as may be seen from Table A6.1.

Characteristic cases of excessively long duty periods were cited in oral evidence with respect to operators not listed in Table A6.1. For example, a driver proceeding from Chatham to a point near Brockville was found to have been on duty 14 hrs. and intended continuing. His wages were reported as \$10 per week⁶.

In cases where vehicles were equipped with sleeper cabs drivers and helpers were shown to have been driving, riding on the vehicle or working off the vehicle for much longer periods than 10 hrs. Two men on a double hook-up regularly for a number of weeks in the season when canned goods have to be moved rapidly were on duty 12 hrs. in a 12-hr. spread, 9 hrs. of which were on the highway, as indicated for Employer No. 6 in Table A6.1, thereby remaining on duty an average of 96 hrs. per week for a series of weeks. On moving vans two men were reported as spending up to 18 hrs. driving and resting alternately (Table A6.1, No. 17). In another instance two men, questioned before they had completed their run, had been 28 hrs. on duty⁷.

Working hours per week were found to be excessive in public commercial vehicle operations in a very large number of cases. Table A6.1, which does not purport to contain more than the results of a sampling, indicates twenty-two working weeks in excess of 70 hrs., sixteen of them being over 80 hrs., eleven over 90 hrs. and four over 100 hrs., the maximum being $110\frac{1}{4}$ hrs. One driver

⁶Evidence, p. 960.

⁷Evidence, p. 971.

reported an average of 97 hrs. per week on duty for 13 weeks (Employer No. 7), the weeks being of 98 $\frac{1}{4}$, 85 $\frac{3}{4}$, 92, 107 $\frac{3}{4}$, 110 $\frac{1}{4}$, 102, 83 $\frac{1}{4}$, 97 $\frac{3}{4}$, 96 $\frac{1}{2}$, 106, 97, 97 and 85 hrs.

Unrefuted oral testimony, apart from that comprehended by Table A6.1, indicated many other instances of unduly long working weeks for drivers, for example: 115 hrs.⁸, 82 $\frac{1}{2}$ hrs., 81 $\frac{1}{2}$ hrs., 93 hrs.⁹, 81 hrs., 84 $\frac{1}{2}$ hrs.¹⁰ and 86 hrs.¹¹.

Strong protest was heard in evidence concerning the undesirable features of the badly-split day, that is a day for which the driver must hold himself in readiness for work over a long period, without necessarily performing more than a reasonable number of hours of actual work. Such arrangement prevents the employee from taking a complete rest or attending to his own affairs during the intervals between actual working periods.

Characteristic instances of this are disclosed in Table A6.1, for example: 9 $\frac{1}{2}$ hrs. in a 15-hr. spread (No. 1b), 6 $\frac{1}{2}$ hrs. in a 12-hr. spread (No. 3a), 10 hrs. in a 19-hr. spread (No. 4a), and 10 hrs. in a 17-hr. spread (No. 10a). Another case, not indicated in the Table, is 14 hrs. in a 17-hr. spread¹².

Wages of Highway Drivers. Wage levels that are low in themselves or that are low in relation to the hours worked are frequently found associated with long hours. The employer who requires or permits only a reasonable length of working day or working week will in all probability pay reasonable wages.

Examination of Table A6.1 reveals the fact of a weekly wage of \$15 having been paid to a driver on regular duty for 11 hrs. a day (No. 2a) and to one for 10 to 11 $\frac{1}{2}$ hrs. a day (No. 7).

Instances of this wage having been paid for long hours of work were cited in oral testimony, altogether apart from the references contained in Table A6.1. For example, a married highway driver with two children was paid \$15 a week for 14 hrs. duty in a spread of 17 hrs.¹³; another married driver with two children was on duty up to 82 hrs. a week and still another, similarly situated, for 82 $\frac{1}{2}$ hrs. a week for this wage¹⁴. Drivers on duty for 76 and 81 hrs. a week for other companies received the same wage¹⁵.

Still lower wages for exacting services on the part of drivers were reported. The driver, already mentioned, who averaged 97 hrs. a week on duty for 13 weeks, received the miserable wage of \$12 a week for this work (Table A6.1, No. 7). A married man with two children¹⁶ worked 67 $\frac{1}{2}$ hrs. a week for \$9. Another driver, on contract operations, worked 115 hrs. in one week¹⁷ for \$12. Still another married man with two children was on duty for 86 hrs. a week for this wage¹⁸. In another instance a driver worked 77 $\frac{1}{2}$ hrs.¹⁹ for \$11.75. Wages of \$10 per week were reported in numbers of instances²⁰.

⁸Evidence, p. 964.

⁹Evidence, p. 1020.

¹⁰Evidence, p. 1028.

¹¹Evidence, p. 1032.

¹²Evidence, p. 975.

¹³Evidence, p. 975.

¹⁴Evidence, p. 987.

¹⁵Evidence, pp. 1025, 1026.

¹⁶Evidence, p. 911.

¹⁷Evidence, p. 964.

¹⁸Evidence, p. 1032.

¹⁹Evidence, p. 1026.

²⁰Evidence, pp. 960, 961.

A more gratifying aspect of the motor trucking industry is disclosed in an examination of the submissions and records of the more stable operators. Thus, as recorded in Table A6.1, one operator (No. 5) pays drivers from \$20 to \$24, and an average of \$21 for a 60-hr. week, with an occasional maximum of 78 hrs. Another, with more generosity than the chaotic rate structure could long support, paid, on the trip basis, about \$25 per week for a week not in excess of 60 hrs. (No. 8). On a trip basis, normally involving 60 hrs. per week, a third paid from \$23 to \$28 per week, net, for drivers of single hook-ups, and about \$29 to \$36 for drivers of double hook-ups (No. 14). A fourth pays for a route involving not over 10 hrs. of duty per day from \$22 to \$32.50 per week and on other routes amounts averaging about \$23 (No. 15a). An important operator, who has permitted excessively long hours on occasion (No. 16), pays wages on a trip basis, for runs of tractors and trailers over 150 miles, averaging from \$27.42 to \$30.75 per week and to drivers of light trucks from \$24.09 to \$25.34 per week.

Oral evidence disclosed the fact that an operator paid \$35 per week for a daily run of 10 hrs.²¹ Another paid \$25 per week for a similar run²². A progressive operator, providing two drivers on vehicles making three round trips a week between Ottawa and Toronto,²³ pays each \$33 to \$34.

Drivers of Pick-Up and Delivery Trucks. While less hazard to the public is probably involved in the long working hours of pick-up and delivery (P. and D.) drivers than in corresponding driving hours on the highway, it is not in the public interest that men should be employed at driving in the cities for the excessive periods that have been reported in some cases or be paid at the low rates that were applied to this work.

Examination of Table A6.2, of Appendix A6, reveals, amongst other significant facts, the following: P. and D. drivers worked for 10 hrs. in a 12-hr. spread in Toronto and Hamilton for \$12 per week (No. 2); in an Ontario town for 10 hrs. a day at 25 cents per hr. (No. 6); in the city of Guelph for 10 hrs. a day for \$10 per week (No. 9); and in certain centres for 58 to 75 hrs. a week for \$15 (No. 10). In certain instances, while the pay is satisfactory, long hours are so frequent as to constitute a menace to public safety. Thus, certain P. and D. drivers worked over 10 and up to maximum periods of from 11¾ to 15¼ hrs. at an average rate of 35½ cents per actual hour worked, or an average rate of \$19.92 per basic 60-hr. week (No. 13). In another case (No. 16), while drivers received between \$22 and \$26 per week, they reported duty periods as high as 74¾, 76¼, 75¼, 87, 79½, 79, 70½, and 79½ hrs. per week and days of 18½, 11½, 18¼, 12, 16½, 10¼ and 19¼ hrs.

Fairly satisfactory working conditions are, of course, to be found in the pick-up and delivery operations of some operators. Wages of \$20 to \$24 per week are paid for hours ranging from 8 to 11½ hrs. per day, by Employers No. 3, 5, 9, 14 and 15. Doubtless many more instances of reasonable hours and wages would be disclosed if it had been practicable to extend the enquiry to all public commercial operators.

Warehouse and Platform Staff. The warehouse and platform men employed by the public commercial vehicle operators were found in many instances to work unduly long hours and to be inadequately paid.

Table A6.3, of Appendix A6, indicates the labour situation in this regard

²¹Evidence, p. 912.

²²Evidence, p. 1042.

²³Evidence, p. 975.

for a few representatives businesses but many more references to it are to be found in the evidence.

Working periods tend to be shorter than for highway drivers and generally within the 10-hr. limit. Hours up to 12 per day are indicated, however, for Employer No. 9 and, in the case of Employer No. 13, about one-half of the days worked by warehousemen were over 10 hrs. Weeks of 65, 72, 73, 75, 77 $\frac{3}{4}$ and 79 hrs. were found to exist for Employers No. 8, 9, and 16. Oral evidence indicating working periods as high as 78, 78 $\frac{1}{2}$, 84, 84 $\frac{1}{2}$ and 85 hrs.²⁴

Wages of \$12 per week were reported as paid in Toronto (Table A6.3, No. 2) and rates of \$13 to \$15 per week are shown for Nos. 2, 4, 6, 9 and 10. Reference to a similar wage paid to married men with children in other cases was made in oral testimony.²⁵

Instances came to the attention of the Commission, and doubtless there were many that did not, of operators who have endeavoured to establish reasonable working conditions for warehousemen as well as for their drivers. Wages up to \$25 and averaging \$21.83 per week are noted in Table A6.3 for Employer No. 5 and, in the case of No. 15, up to \$27 per week for warehousemen outside of Toronto and up to \$33 for those in Toronto. While weekly hours up to 79 were reported for No. 16, the average weekly earnings of warehousemen were in general about \$25 to \$26. No. 18 paid an average of \$21.25 for a 48-hr. week.

Shop Staff. By reason of the higher degree of skill and longer apprenticeship required, the working conditions for the shop staffs of public commercial vehicle operators are markedly better than for drivers or warehousemen.

Table A6.4, of Appendix A6, contains only one instance of hours in excess of 60 per week, namely 69 $\frac{3}{4}$ as an observed maximum for Employer No. 16. The minimum wage for fully qualified mechanics employed by P.C.V. operators is \$18 (Nos. 6, 12 and 19). The pay reported exceeds \$25 per week for Employers Nos. 9, 10, 14, 15 and 18, amounting to \$32.85 per week of 45 hrs. in the last case.

Clerical Staff. Doubtless the working conditions established for female office workers under the Minimum Wage Act has influenced both hours of work and rates of pay for male clerical help.

The hours reported appear, in general, to be fair but Employer No. 12 (Table A6.5) requires an office night man to be on duty 11 hrs. in a 12-hr. spread.

Wages were found in considerable numbers of cases to be too low for men with family responsibilities. A weekly rate of \$15 is paid by Employers Nos. 2, 10, 14 and 19 and no doubt many more not listed in Table A6.5, which is merely a sampling table. As little as \$10 is paid by No. 14. On the other hand, wages up to \$25, \$28, \$30 and \$32.50 per week are paid by certain employers.

6.5—Hours and Wages in the Operation of Private Commercial Vehicles. *General.* Particularly strong contrasts exist in the working conditions maintained by various operators of motor trucks in their own businesses and not for hire. While financial ability and the difficulty of conducting a business for any profit at all are naturally of paramount importance in fixing hours and wages, a genuine solicitude for the welfare of the worker has been evident to the Commission in a number of cases. In many instances the hours and wages found for those employed in the operation of private commercial vehicles were found to be fair and in certain cases even definitely attractive to the worker. In other instances they were unfortunately anything but fair.

²⁴Evidence, pp. 991 and 1001.

²⁵Evidence, pp. 989, 992 and 1004.

Drivers. Table A6.6, of Appendix A6, which is merely a sampling table, discloses maximum weeks of $54\frac{1}{2}$, $69\frac{1}{2}$ and $72\frac{1}{2}$ hrs. in three random-selected months for drivers in the pay of Employer No. 33, with maximum daily working periods in these months of 13, 14 and $18\frac{1}{2}$ hrs. For one of the months, 59 per cent. of the drivers worked over 60 hrs. per week. The average weekly wages, which range from \$17.62 to \$20.55, are, in the opinion of the Commission, not sufficiently high for drivers having their headquarters in Toronto and often operating outside of the city.

Excessively long hours attend the operations of the large canning company designated as No. 36, to which somewhat extended reference is warranted.

In one district, for the week ending June 26, 1937, certain drivers worked from $67\frac{1}{4}$ to $98\frac{1}{2}$ hrs., with an average of $73\frac{1}{2}$ hrs. for all drivers. Maximum days involving as much as $18\frac{1}{2}$ and $19\frac{3}{4}$ hrs. were reported, with an average day of 12 hrs. For the week ending October 2, 1937, certain drivers worked $97\frac{1}{2}$, $96\frac{1}{4}$, $99\frac{1}{2}$, 76, 66, $95\frac{1}{2}$, $88\frac{1}{2}$ and $72\frac{1}{2}$ hrs. for a 7-day week and 66 to $95\frac{1}{2}$ hrs. for a 6-day week. The maximum day was 19 hrs. and the average day 13 hrs. For most of the men the rate of pay was 35 cents per hr., and the average earnings for these long working weeks about \$26.

In another district, for the week ending June 26, 1937, part-time drivers worked as long as 81 hrs. per week with up to 13 hrs. a day driving, receiving 20 to 30 cents per hr. and weekly wages from \$12.65 to \$17.40. Somewhat similar conditions were found for the week ending July 3. For the week ending October 2, one part-time driver spent $76\frac{1}{2}$ hrs. driving and 39 hrs. on other work, totalling $115\frac{1}{2}$ hrs. in all, made up of days of 15, 20, $16\frac{1}{2}$, 18, $17\frac{1}{2}$, $17\frac{1}{4}$ and $13\frac{1}{4}$ hrs., for which he received 30 cents per hr. Another man spent 89 hrs. on a truck and 6 hrs. on other work, or 95 hrs. at 30 cents per hr. Still another worked $102\frac{3}{4}$ hrs., 95 of them driving, for 25 cents per hr.

It was represented by the company under consideration that the necessity of expeditious moving of fresh fruits and vegetables during the summer and early autumn, often involving the rendering of aid to the farmer and fruit-grower in the matter of haulage, made such hours unavoidable. An independent canner and grower reported that he found it necessary to work drivers 14 or 15 hrs. a day in the fresh fruit season and that 75 hrs. per week is not too much.²⁶

Whether it be necessary or not for the farmer and his helpers to work for hours that are far longer than are current in general industry, the practice should not be extended to other employment. Unreasonably long hours are the natural consequence of confining the haulage, by necessity or by choice, to such persons as will work for the very low wages offered. It cannot be successfully maintained that the conditions found in this representative company of the canning industry are in the general interest. Such measure of public control as may be required in the circumstances should be instituted, both for the sake of the employee himself and in order to remove the public hazard of highly fatigued drivers operating on the highways. Manifestly, too, 20 to 30 cents an hour is not adequate pay for the drivers of motor trucks, having regard to the degree of skill required and the extent of the responsibility that must be assumed.

While the occasional working day of 12 hrs. and week of 72 hrs. reported for Employer No. 37 (Table A6.6) may not be objectionable, there is evidence that these extended periods of duty are far too frequent.²⁷

²⁶Evidence, p. 7350.

²⁷Evidence, p. 893.

Strong objection was taken in evidence to the unduly long hours demanded of their drivers by fruit dealers and dealers in "junk." William Bentley, a married driver, with five children, who appeared voluntarily before the Commission, stated that he had worked five weeks for a fruit dealer during which he was on duty for an average of from 100 to 110 hrs. per week and was rarely off the truck for more than six hours at a time. On one trip he left Toronto at 9 a.m. on Sunday, arrived in Montreal at 3 a.m. on Monday, began unloading at 6.30 a.m., left Montreal at 10 a.m., arrived back in Toronto at midnight Monday-Tuesday, spent $1\frac{1}{2}$ hrs. in getting instructions from his employer, then left for Vineland and spent the remainder of the night and Tuesday driving and gathering a load, arriving back in Toronto at 10 p.m. on that day. Without excluding time for meals, which could not have bulked large in the total, this trip involved 18 hrs. duty plus $3\frac{1}{2}$ hrs. rest plus $39\frac{1}{2}$ hrs. duty, or $57\frac{1}{2}$ hrs. without sleep, save for the $3\frac{1}{2}$ hrs. at Montreal. His earnings per week were \$15 and his estimated living costs \$21.50. In order to make ends meet his wife had to find employment.²⁸

Reference was also made in the evidence to a fruit truck which upset between North Bay and New Liskeard after having been driven 22 out of 27 hrs. and 19 hrs. continuously, except for stops for meals.²⁹

On the other hand, many instances were found of excellent working conditions for drivers of private commercial vehicles. For most of those organizations noted in Table A6.6, daily working hours over 10 occur either rarely, or for a very few drivers on special duty, and the working week ranges generally from 48 to 56 hrs. Wages lie in general between \$25 and \$35 per week and, in addition, benefits of substantial monetary value are provided by numbers of employers, particularly Nos. 31, 32, 34, 39 and 40.

Warehouse and Platform Staff. The working conditions reported for the warehouse and platform staffs of private commercial vehicle operators appeared to be satisfactory. Employers Nos. 33 and 34 (Table A6.3) pay such employees between \$21 and \$29 per week, with an average of about \$26.

Shop Staff. The working week for shop men employed by private commercial vehicle operators is generally 48 hrs., but is as low as 44 hrs. for Employer 39 (Table A6.4) and as high as 62 hrs. for Employer No. 33. Wages for fully qualified mechanics usually lie between \$23 and \$32 per week, but in the case of Employer No. 40 the range is from \$19 to \$40, the average for the latter being close to \$30.

Clerical Staff. For the only case reported the clerical staff for a private commercial vehicle operator was paid between \$22 and \$26 per week with bonuses augmenting each of these sums by about 46 cents per week.

SECTION 3—WORKING CONDITIONS IN THE OPERATION OF BUSES FOR HIRE

6.6—Hours and Wages in the Operation of Public Vehicles (Buses).

General. Due to the concentration of the greater part of the for-hire motor bus business of the Province in a small number of strong organizations, the hours of work are conspicuously shorter and the wages higher than exist in operations of freight motor vehicles for hire. This applies not only to drivers but also to the other classes of employees concerned.

Drivers. For drivers the 48-hr. week is very common on regular service for the larger operators, and only one employer in Table A6.7 (No. 24) indicates a possible daily maximum of 10 hrs. Even then, it is stipulated that after a

²⁸Evidence, pp. 1071-81.

²⁹Evidence, p. 897.

150-mile run a driver is not permitted to drive until he has had at least 8 hrs. of rest. Average wages range generally between \$25 and \$30 per week but may be as low as \$16 for operators serving small urban centres (No. 28) to nearly \$50 a week in one case (No. 24).

Shop Staff. For the shop staffs of public vehicle operators the hours per week ordinarily range between 44 and 54. Average weekly earnings for fully qualified mechanics vary from about \$24 to \$29 per week.

Clerical Staff. Wages for the more responsible clerical positions in connection with bus services vary from \$25 to \$35 per week.

SECTION 4—BENEFITS PROVIDED FOR MOTOR TRANSPORT EMPLOYEES

6.7—General. Although from the point of view of the transport worker the matter of hours and wages is of paramount importance, the collateral working conditions may be such as to affect greatly the attractiveness of the employment and the effectiveness of his service. Far-sighted and public-spirited employers have done much towards creating such conditions and, indeed, the progressiveness and stability of a transport business may to a great extent be gauged by the measures which have been provided by it for the well-being and security of its employees.

6.8—Public Commercial Vehicle Operations. By and large, it must be said that the benefits made available to employees of public commercial vehicle operators, apart from wages paid, are relatively much less general and less important than the benefits extended by private operators employing fleets of trucks as an incident to their own business or those granted by the operators of public vehicles. In many cases that have come to the attention of the Commission no special benefits at all are provided. A representative cross-section of the industry in this regard is given in Table A6.1, of Appendix A-VI.

Payment of Road Expenses. As is evident from Table A6.1, certain employers do not pay any part of the road expenses, that is, expenditures for meals and lodging en route and at the far terminal. Some employers pay all of them, others pay for lodging but not for meals and still others grant definite allowances towards road expenses. In some instances extra expense incurred by reason of delay is met and the driver paid for the additional time required to complete the trip.

Provision of Uniforms. In most cases the drivers of public commercial vehicles do not wear uniforms, or if they do wear any part of such they must pay for it themselves. In one case, No. 6, the employer pays 25 per cent. of the cost. Employers Nos. 8 and 13 provide free caps and No. 8, when in business, paid one-half the cost of laundering shirts and trousers, which were owned by the laundry.

Holidays. Of those employers listed in Table A6.1, only one undertook to grant holidays with pay, and the business of this operator has since been absorbed by another organization.

Health Service. No case of a standing arrangement for the provision of part or all of necessary medical, dental or hospital service on the part of a P.C.V. operator has come to the attention of the Commission.

The somewhat elastic arrangement of balancing short time by overtime noted in Table A6.1 doubtless serves to carry a worker over a minor illness without loss of pay but no operator of freight motor vehicles for hire was reported as making provision for paying the worker during an extended period of incapacitation.

Pensions or Retiring Allowances. Provision for pensions or retiring allowances for workers employed in public commercial vehicle operations do not appear to exist.

Life Insurance. Where group insurance is taken by employees the employer usually undertakes the clerical work incident thereto without charge. One instance of the employer contributing a part of the necessary premiums was reported (No. 8).

Deductions from Pay. Deductions from pay may be made under certain circumstances. Drivers are sometimes required themselves to pay any fines levied for infractions of the Highway Traffic Act resulting from speeding or negligence. One employer (No. 13) makes deductions from pay for damages due to carelessness. Shortage in monies collected is penalized by another by a charge of 10 per cent. on the shortage and still another made a charge of 25 cents for any advance on pay.

6.9—Private Commercial Vehicle Operations. While no benefits apart from wages received are enjoyed by those employed in connection with the operation of the great majority of freight motor vehicles operated as an incident to a business, and not for hire, there are some admirable arrangements in force for the benefit of employees of organizations operating large fleets of trucks. Generally, such benefits are in conformity with comprehensive welfare plans applicable to all employees of the business, whether assigned directly to the operation of vehicles or to other duty. The fact that the operators of public commercial vehicles have so far done little in this regard is probably in part due to the comparative youth of the motor trucking industry.

Some indication of the nature and extent of benefits granted by the operators of private commercial vehicles may be seen from Table A6.6, of Appendix A-VI. This table relates to the freight motor vehicle operations of a number of important but representative organizations. The value of the benefits may be very considerable. In the case of drivers in the service of Employer No. 40 it amounts to an estimated total of \$4.28 per week.

Table A6.6 does not apply to small operations, such as those of the small merchant or the farmer, who would not usually have any scheme of benefits for employees.

Payment of Road Expenses. From the submissions made it would appear that at least the larger operators of private commercial vehicles pay the road expenses of their drivers.

Provision of Uniforms. Those organizations requiring their drivers to wear uniforms generally provide them without expense to the employee, as indicated in Table A6.6.

Holidays. The granting of holidays with pay is general for the operators of substantial fleets of trucks, as may be seen from Table A6.6. These extend from one to three weeks, but in nearly all cases do not exceed two weeks. Large retail stores also give their motor transport employees the benefit of all public holidays and certain additional half days in summer or on Saturday afternoons.

Health Service. Valuable benefits to transport employees are provided by certain large retail stores in the matter of a measure of free medical, dental and hospital service. During illness the employee receives pay in accordance with the merits of his case, this amounting in some cases to full pay, as indicated in Table A6.6.

Pensions or Retiring Allowance. Important and well-established commercial organizations make provision for non-contributory pensions or retiring allowances, as is indicated for Employers Nos. 31, 39 and 40 in Table A6.6. These are naturally based on length of service and age at retirement.

Life Insurance. Non-contributory life insurance is provided by certain operators of private fleets of trucks, for example, Nos. 34, 36 and 40. Employer No. 39 pays 10 per cent. of the life insurance premiums of its transport employees.

Miscellaneous Benefits. Bonuses at Christmas and also to drivers for freedom from accident are paid by one employer (No. 32). Employees' benefit associations are often encouraged. Employer No. 34 contributes 50 per cent. of the cost of the employees' benefit plan which provides workers with 60 per cent. of their wages during illness. The large retail stores give discounts of generally 10 per cent. on purchases made by their transport employees, provide low-cost cafeteria service and recreational facilities and in at least one instance invite such workers to join the employees' savings and profit sharing fund.

6.10—Public Vehicle (Bus) Operations. No details of benefits conferred by the operators of passenger motor vehicles for hire were furnished to the Commission.

SECTION 5—WORKING CONDITIONS IN OTHER FORMS OF TRANSPORT THAN MOTOR TRANSPORT

6.11—Conditions in Rail Transport. *Hours and Wages.* In instituting a comparison between the hours, wages and other working conditions existing in the railway service and those prevailing in motor transport it must be borne in mind that the positions held by employees in the two kinds of transport are not generally comparable. It is consequently necessary to restrict the comparison to positions that demand of the occupants approximately the same degree of skill and responsibility.

Wages subsisting in the steam railway service are determined by agreement between the railways and the railway brotherhoods and are not fixed or limited by statute or government regulation. The 8-hr. day and 6-day week are in general observed, except (a) in the main equipment repair shops, where a 44-hr. week governs, and (b) in train service where the standard day is defined as a 100-mile run (rated as equivalent to 5 hrs. of time) for engineers and firemen in both passenger and freight service and conductors, baggagemen and brakemen in freight or mixed service and a 150-mile run for conductors, baggagemen and brakemen in passenger service.

Although the standard day on train service is short compared with the standard day in industry generally, the hours actually spent on duty may be long. There is no regulation in Canada, as there is in the United States, restricting a railway engineer to 16 hrs. on duty. He is permitted to be the judge of his own fitness to continue his run or to undertake a new one,³⁰ although he may claim rest after 12 hrs. on duty.³¹

Typical average hours worked by passenger train crews on the Canadian National Railways are between 7 and 8 hrs. and by freight train crews between 9 and 10 hrs.³² The working periods are similar for the Canadian Pacific Railway.

³⁰Evidence, pp. 6564, 6626.

³¹Evidence, p. 790.

³²Evidence, p. 789.

On way-freight service the period of duty may be especially long. For example, an engineer and fireman on way-freight service were reported as on duty for 13¼ hrs. and on this particular run might be similarly on duty for six days a week.³³ Much of this time was spent in waiting, since the actual running time for the distance covered was only about 5 hrs. While a substantial number of men might be on duty, but not necessarily working, for 13 or 14 hrs.,³⁴ the number on duty for longer periods are relatively very small. In an analysis of 10,000 trips made for November, 1937, Mr. C. F. Needham, of the Canadian National Railways, reported that only 7 men were on duty between 16 and 17 hrs., 6 men between 17 and 18 hrs. and 2 men between 19 and 20 hrs.³⁵

Remaining on duty for these very long periods for a number of days in succession is prevented not only by regulations of the railway³⁶ but also through the observance of the maximum monthly mileages permitted under the agreement with the brotherhoods.

In so-called transportation and station service, the standard week is of 48 hrs. No indication was given in the evidence of any large amount of overtime in connection with such work.

Payment in train service is made at a rate per mile, with a stipulated minimum daily or monthly rate. In any comparison with wages paid to drivers and drivers' helpers in motor transport, the minimum daily, minimum monthly and average pay for the month of September, 1937, for the Central Region of the Canadian National Railways shown in Table 6.1 will be of interest. The rates of pay in the Canadian Pacific Railway service do not differ substantially from these.

Table 6.1—Minimum Daily, Minimum Monthly and Average Pay for Certain Classes of Employees Engaged in Train Service, Central Region, Canadian National Railways, September, 1937

Class of Employee	Minimum Daily Pay	Minimum Monthly Pay	Average Pay for September, 1937
Passenger conductors	\$6.70	\$201.00	\$254.06
Freight conductors	\$6.16 to \$6.68	...	239.97
Passenger engineers	6.16 to 6.64 (a)	...	289.11
Freight engineers	6.84 to 8.36	...	281.19
Passenger baggagemen	4.86 to 5.54	145.80	183.27
Passenger brakemen	4.70	141.00	157.90
Freight brakemen	4.84 to 5.58	...	163.07

(a) Daily guarantee of \$7 for each day service is performed.

In train service, men are under pay all of the time they are on the train, but if a train run is made, be it ever so short, the engine crew and the train crew must be paid a full day's pay.³⁷

Men held waiting for trains are not paid for the first 7 hrs. in the case of assigned men and for the first 16 hrs. in the case of unassigned men.³⁸

Where a day is made up of a number of short trips (less than 80 miles)

³³Evidence, p. 786.

³⁴Evidence, p. 787.

³⁵Evidence, p. 6565.

³⁶Evidence, p. 6617.

³⁷Evidence, p. 798.

³⁸Evidence, pp. 803, 804.

the men are paid extra. If a man is on duty over 8 hrs. in 10, he is paid overtime for the excess.

In transportation and station service the rates of pay of men whose duties resemble in any appreciable degree the duties of motor transport employees are indicated, for the Canadian National Railways, in Table 6.2. The corresponding amounts paid by the Canadian Pacific Railway are similar.

Table 6.2—Rates of Pay for Certain Employees Engaged in Transportation and Station Service, Central Region, Canadian National Railways

Class of Employee	Schedule Rate of Pay	Compensation per Week (Excluding Overtime)
Baggage, parcel-room and station attendants..	\$97 to \$135 per mo. (average \$115)	\$26.88
Baggage porters	49 cents per hr.	23.52
Gang foremen, freight stations	\$135 to \$150 per mo. (average \$143)	33.60
Freight checkers	\$133 per mo.	31.29
Callers, loaders, coopers and sealers	53 cents per hr.	25.44
Truckers	50 cents per hr.	24.00

Two classes of workers that in some respects approach motor transport employees in the nature of their duties, but not in the extent of their responsibilities, are the "truckers," who operate trucks on the freight shed platform, and the baggage porters. It is interesting to note that the former work 48 hrs. a week at 50 cents per hr., receiving \$24 per week, and the latter for 48 hrs. at 49 cents per hr., receiving \$23.52 per week. These men more nearly correspond to the "helper" on a motor truck than to the driver of it.

Men engaged on maintenance of equipment in the Canadian National Railways service work, for the most part, a basic week of 40 hrs. Machinists, blacksmiths, sheet metal workers and others of similar skill receive 79 cents per hr., and the average compensation per week, excluding overtime, was reported as \$23.13.

Benefits Enjoyed by Rail Transport Employees. The benefits for which the employees of the more important railways operating in the Province are eligible are of importance in instituting any comparison between the conditions in motor transport and those in rail transport.

So far as road expenses are concerned, the practice of the Canadian National Railways, as stated by Mr. Needham, is to require the men to pay for their own meals, but if the railway has sleeping accommodation for employees away from home it is supplied free. Engineers and firemen are provided with such and the conductors and brakemen in freight service sleep in the caboose. In many cases, however, passenger conductors, baggagemen and brakemen must pay for their own accommodation at turn-around points.³⁹

Regular men in the railway passenger service are supplied with their uniforms free. On the Canadian National Railways, spare or temporary men pay one-third of the cost of their uniforms.

Under the Canadian National Railways Pension Fund plan, employees at age 65, with specified requisite length of service, receive a pension at the sole expense of the company, the amount depending on the age at which they entered the service and the length of service. After ten years of service an employee

³⁹Evidence, p. 776.

may augment his pension by contributing a percentage of his salary up to 10 per cent. The company will add to this amount up to 5 per cent. of the employee's salary, both to be credited with interest.⁴⁰ Pension schemes are also in force on the other railways operating in the Province.

The Canadian National Railways also contribute annual sums to both the Grand Trunk Railway Insurance and Provident Society and the Canadian Government Railways' Employees' Relief and Insurance Association supplementing the employees' own contributions. Benefits in the event of illness, injury or death are paid.⁴¹

The Canadian National Railways maintain a medical clinic at Toronto where free periodic examinations are made.

A further benefit arises from the fact that the employees of the railway and dependent members of their families are granted free passes for travel on the company's lines.

Similar benefits are granted by the other railways operating in Ontario.

6.12—Conditions in the Railway Express Service. *Hours and Wages.* Consideration of the situation with respect to hours and wages in the railway express service is helpful in any attempt to appraise the fairness of the hours and wages in effect in motor transport.

According to Exhibit No. 130 and the evidence of Mr. G. R. Jones, of the Canadian Pacific Express Co.,⁴² the day's work in the express service, excluding employees on train messenger service and those at offices having five employees or less, is 8 consecutive hours, exclusive of the meal period. At offices having five employees or less, including the agent, 8 hours in 11 consecutive hours (exclusive of time for meals) constitute a day's work.

Except in the case of messengers and their helpers, employees are not expected to work more than 6 days a week. For a seventh day or seventh night, schedule overtime rates are paid, with a minimum of three hours at hourly rates.

Excluding employees on train messenger service, the first hour of overtime accruing after 8 hrs. service within a spread of 12 hrs. is paid for *pro rata*; thereafter, including overtime after 12 hrs., at time and a half; for Sunday, when such is not a regular day in the week's work, at double time. Employees working on Sunday as a regular day, and who put in overtime in addition to the regular day's work, are paid for such overtime at double time. The evidence indicated, however, that there was very little overtime in the express service of the Canadian Pacific Express Co.⁴³

Exclusive of train messenger service, employees called upon to work on public holidays are paid at time and a half.

The rates of pay vary, in general, with the importance of the agency. The Canadian Pacific Express Co. divides its agencies in four groups, A to D, and grades the pay according to the length of service, as indicated in Table 6.3. These are based on an agreement between the company and the men. In general, the larger cities are contained in Group A, and the smaller urban centres in the other groups in descending order as to size.

Vehicle helpers, who are not in charge of vehicles, and who are employed

⁴⁰Evidence, p. 6541.

⁴¹Evidence, p. 6544.

⁴²Evidence, p. 7032.

⁴³Evidence, p. 7049.

only at Group A agencies, receive \$90 per month for the first 6 months, \$95 for the second 6 months, \$100 for the second year and \$105 for the third year.

The actual pay received by the employees mentioned above is greater than the indicated amounts by reason of long-service bonuses and overtime. The rates paid to certain men may be out of line with those paid to others, since in applying the schedule the pay of no man was reduced.

The service performed by an express messenger is in some measure similar to that of a truck driver who may be in charge of a valuable cargo or who may be required to make collections. The express messenger is responsible for the express traffic in his car. Runs are based on a monthly average of 6000 miles and are equivalent to 48 hrs. per week. The average weekly period of duty, in Ontario, for Canadian Pacific Express Co. train messengers is 43 hrs. 20 min., but some of the runs are long. The Toronto-Detroit one requires approximately 13 hrs. and the Toronto-Chapleau one somewhat longer.

Runs are classified according to importance and payment of messengers varies in accordance with the run. For first class it is \$170 per month; second class, \$160 per month; third class, \$150 per month; for fourth class, \$135 per month for the first 6 months and \$145 per month thereafter.

Table 6.3—Rates of Pay, per Month, of Vehiclemen and Warehousemen in the Service of the Canadian Pacific Express Company

Class of Employee and Period of Service in Years	Group of Agencies			
	A	B	C	D
Vehiclemen				
1st 6 months	\$110	\$105	\$100	\$100
2nd 6 months	115	110	100	100
2nd year	120	115	105	105
3rd year	125	120	110	105
Warehousemen				
1st year	115	110	105	105
2nd year	120	115	110	105
3rd year	125	120	110	105

In the recently instituted freight cartage department of the Canadian Pacific Express Co. the 48-hr. week is accepted as standard and time and a half is paid for overtime. One week's holidays with pay are granted after three years' service. Men are paid \$80 per month for the first 6 months; \$90 per month for the second 6 months and \$100 per month after the first year.

Pay and working conditions in the Canadian National Express service are similar to those in the Canadian Pacific Express Co.

Benefits. All employees of the Canadian Express Co. below the rank of general agent receive a long-service bonus after 10 years' service of \$5 per month for the first 10 years, increased by \$5 per month for each additional 10 years. Three-quarters of the company's employees are now drawing long-service bonuses, averaging \$6.60 per man per month over the system. About 42 per cent. of the employees have 20 years' service or more and there is an extremely small labour turnover.⁴⁴

In addition to the bonus system there is a contributory pension plan.

⁴⁴Evidence, p. 7043.

Moreover, the employees operate a sick benefit association to which the company lends its facilities for the collection of dues.

Free uniforms, including caps, are supplied to vehiclemen.

Free transportation is granted express company employees and their families over the company's lines.

After three years' service employees are granted one week's holiday and after five years' service a two weeks' holiday with pay.

6.13—Conditions in Water Transport. Conditions of labour in water transport necessarily differ very greatly from those obtaining in motor transport, not only because of the different character of the duties, but also by reason of the fact that on board ship meals and lodging are provided free for the men. A value of one dollar per day is commonly assigned to board and consequently any salaries or wages stated below should be augmented by this amount if they are to be at all comparable with the wages of motor transport employees.

It is difficult to designate any one occupation connected with water transport that would afford a completely satisfactory basis of comparison, so far as hours and wages are concerned, with those applicable, for example, to motor truck drivers. Certain positions on board ships plying inland waters appear, however, to carry with them degrees of responsibility approximating those of some classes of workers in motor transport and, consequently, an examination of the hours and wages for these should be of some guiding value.

A considerable mass of material respecting hours, wages and general working conditions was submitted to the Commission by nine navigation companies, from which certain helpful deductions may be drawn. From the nature of navigation it is obvious that, in general, men must be on duty seven days a week and very commonly 12 hrs. a day, usually 6 hrs. on and 6 hrs. off. Duty periods of 8 to 9 hrs. are established in a few cases but, of course, there is no overtime in water transport.

The working season may be considered as anywhere from 4 to 12 months, depending upon the company's operations and the nature of the position. It is customarily from 6 to 8 months, but certain men are carried on the payroll after the boats are laid up, being employed in repair and refitting work for next season.

Omitting the senior positions of master, chief officer and chief engineer and certain irrelevant occupations, a scrutiny of the statements respecting pay submitted by the nine companies discloses the following significant facts.

First mates, employed generally from 6½ to 8 months, are paid from \$95 to \$160 per month, and usually over \$110 per month.

Second mates are reported as engaged generally for about 8 months at from \$100 to \$120 per month.

Wheelmen are engaged from 6½ to 9 months usually at from \$70 to \$85 per month.

Watchmen are paid usually from \$50 to \$70 per month and may be required from 4 to 8 months. One company requires a 9-hr. tour of duty.

Sailors or deckhands are required to work from 8 to 12 hrs. per day, the latter in two shifts, and are paid from \$30 to \$60 per month on an engagement of 4 to 9 months. In most cases the pay is from \$40 to \$50.

Second engineers are usually engaged for 10 to 11 months at from \$70

to \$160 per month, the prevailing pay being from \$125 to \$150. Third engineers are paid from \$110 to \$120.

Oilers, engaged from 6 to 8 months, receive from \$55 to \$90 per month and generally about \$70.

Firemen are paid from \$40 to \$85 per month, and usually from \$55 to \$75. In one case the working day is only two shifts of three hours.

One company, paying wages fairly well up in the scale, reduces the pay for certain men in the month of October. This company, reporting on wages paid for shore duty, states that 40 to 43 cents per hr. is paid to checkers and shedmen working up to 13 hrs. a day but, on an average, less than 10 hrs. For Sundays and holidays, 50 cents per hr. is paid at Toronto. Such men are in duties and responsibilities analogous to warehousemen in the motor transport industry.

6.14—Working Conditions in Air Transport. No submissions were made to the Commission in the matter of hours, wages and benefits of men employed in connection with air transport. According to the Canada Year Book, 1938, there were, in 1936, 548 persons employed in commercial aviation at an average salary or wage of \$1488 per annum. The flying clubs employed 67 persons at an average of \$1206 per annum.

From correspondence, the Commission learns that the minimum rates paid by a large air transport organization, for positions at all comparable to those in motor transport, are, per month: \$200 for a second pilot, \$200 for a chief mechanic or foreman, \$175 for a crew chief or sub-foreman, \$115 for an air engineer or aircraft mechanic, \$80 for an air engineer helper or aircraft mechanic helper, and \$80 for chauffeurs, firemen and servicemen. The maximum monthly rates exceed the minimum by from 15 to 75 per cent.

Except for positions in the lower grades, these amounts are somewhat greater than the average of salaries and wages paid by highway motor transport in Ontario as a whole for the same year. Excluding executives, it was \$1024.⁴⁵

⁴⁵Brief of the Automotive Transport Association of Ontario, February 23, 1938, p. 16.

CHAPTER VII

LICENSING AND TAXATION

SECTION 1—PURPOSE TO BE SERVED IN LICENSING AND TAXATION

7.1—General. The licensing of motor vehicles in Ontario began in 1903, when 220 automobiles were registered. In this the Province followed the lead of several of the state governments in the United States, whose action had been occasioned by the use of motor cars in numbers within their jurisdictions. Having regard to the few vehicles in the Province at the time, it is apparent that the principle underlying licensing was the protection of the public against a potentially dangerous vehicle utilizing the common highways, a vehicle that was very objectionable to the majority of road users.

The essential feature of all motor registration from the beginning has been that the licence number must be distinctly visible at all times, to the end that the owner of the vehicle may be readily identified in the event of any accident or infraction of the law. It is possible that had mechanical power been utilized first for the transport of heavy loads at low speed, no licence system might have been established. The relatively great speed of even the earliest automobile over the horse-drawn traffic made licensing imperative as a safety and law enforcement measure.

7.2—Reimbursement for Administrative Costs. When identification of the vehicle was the sole object in mind, the licence fees were nominal, and designed to cover at most the cost of licence plates and the administrative charges of the licence office. For the years 1903, 1904 and 1905, the fee for a new automobile licence was \$2.00, and \$1.00 for a renewal of a licence. In 1906 these fees were raised to \$4.00 and \$2.00, respectively, and so remained until 1911. In 1911 a yearly licence fee of \$4.00 was instituted for automobiles. Motor cycles were placed in a separate category at this time and their annual licence fee fixed at \$3.00.

7.3—Licence Revenue for Construction and Maintenance of Highways. It was not long before opinion developed favourable to the establishment of licence fees definitely in excess of the mere costs of administration. The Public Roads and Highways Commission, 1914, referred to the matter in these terms:¹

“Taxation of motors is often suggested. Your Commissioners recognize the justice of the suggestion to this extent, that they recognize the automobile as a form of wealth which is proper for taxation, and agree that it is fair to appropriate the amount raised for road improvement.”

The present Commission concurs in the principle thus enunciated in 1914.

Doubtless as a result of the attitude of the Commission of 1914 the principle of licensing for revenue was adopted in the following year. Licence fees for automobiles were based on power, and commercial motor vehicles with a gross weight of two tons or less were required to pay a flat fee of \$5.00 and those in excess of two tons, \$3.00 per ton. The fees collected in that year were more than double those of the previous year.

¹Report of the Commission, p. 24.

In 1919, the principle of a higher rate of licence fee per ton for the heavier vehicles was introduced. While other licence fees remained unchanged, commercial vehicles with a gross weight in excess of two tons were assessed \$5.00 per ton for their licences; those with a gross weight in excess of eight tons and not more than ten tons, \$7.50 per ton; and those over ten tons, at the rate of \$10.00 per ton. These rates continued through 1920.

As the number of motor vehicles increased, licence fees steadily rose, particularly for the larger types of trucks, until 1938, when a reduction was made. The principle of an increasing rate of tax with increasing weight of vehicle was extended in 1925, when the basis of licence fees for commercial vehicles was made the gross weight, that is, the combined weight of vehicle and the registered carrying capacity. Details of present licence rates will be found in Art. 7.8.

7.4—Motor Vehicle Revenue as General Revenue for the Province.

In the year 1920 the Highway Improvement Fund was established by legislation of the Drury Government.² It is difficult to draw any other conclusion from the wording of the Act than that all provincial revenues derived from motor vehicles were intended to be earmarked for highway improvements, and that the first charge on such revenues was to be the carrying charges, on provincial bonds issued to provide funds for highway improvements.³

Mr. E. C. Drury, in his evidence before the Commission, testified to that effect, thus:

“The tax on motor vehicles was regarded definitely at the inception of the policy as being a fund from which roads could be built and maintained, and our first programme was based on the estimated expenses that were to be taken care of by the then revenue with a twenty-year depreciation.”⁴

At the time of establishing the Highway Improvement Fund, no one had any conception of the growth of motor traffic, of the amount of revenue that motor traffic was to yield in a very few years, or the demands upon that revenue and other provincial funds for highway improvements. Credits to the Fund, other than revenues under the various statutes, very soon became a minor fraction of the total amounts charged through the Fund, and it seems safe to say that it never functioned in detail as it was first presumably intended to do.

From the beginning, as a study of the Public Accounts of Ontario clearly shows, the issue of provincial bonds has provided all money expended by the Province on capital account on highways of any character; any excess of motor vehicle revenue above ordinary maintenance and administration of the highways has been included in the current revenue of the Province and utilized for general purposes, not the least of which is interest and retirement charges on provincial debt, including that substantial part of it created for the construction of highways.

The carrying charges on the highway debt exceeded the surplus revenue from highways in many years, as a comparison of column six, Table 12.16 and column three, Table 12.15 indicates. In the period November 1, 1918, to March 31, 1938, provincial highway revenue from all sources fell short \$23,018,410 of meeting costs of maintenance and administration and interest and sinking fund payments on the money borrowed for provincial capital expenditures on highways.

²S.O. 1920, c. 20.

³See Arts. 4.4 and 4.11.

⁴Evidence, p. 6750.

In actual practice, highway revenue has never been deemed other than general revenue available to meet the general expenses of the Province, despite frequent and totally unfounded objections that are voiced concerning this so-called "diversion of funds."

Technically, there may be some grounds for criticism. An obvious one is that, under the regulations, a rebate of the tax on gasoline or other motor fuel is made when it is utilized for any purpose other than locomotion along the highways. As pointed out in Art. 4.12, the tax on gasoline was instituted in 1925, and, by almost coincident legislation, an amount equivalent to the sum collected annually under the Gasoline Tax Act and the regulations made thereunder was to be credited to the Highway Improvement Fund. The Department of Highways is the collecting agency for the motor fuel tax under this Act, lending further colour to the contention that this tax was intended solely for road improvements.

On the other hand, it is apparent that the owners and users of motor vehicles have not suffered by the procedure that has been followed. As is shown in Table 12.14, since 1903, when the first motor vehicle revenue was collected, the Province has incurred a highway debt of \$249,230,617 by reason of spending far more on the highways than it has received from the users of them.

SECTION 2—LICENSING OF MOTOR VEHICLES

7.5—Present Basis of Motor Vehicle Licensing. The present basis of licensing motor vehicles has been reached through gradual development. Following the adoption, in 1915, of the principle of including in the licence fee a tax on the vehicle as representing a form of wealth properly applicable to road improvements, there is traceable in the licence fees from time to time established, an evolution of the idea of an additional payment being warranted from heavy vehicles for anticipated additional damage to the roads caused by their weight, or by the character of their tires. The anticipation of such possible damage is apparent from the statutory provisions limiting loads on any one axle, the width of tire surface for any given wheel load, *etc.* contained in Part VI of the Highway Traffic Act.⁵

With a minimum commercial licence fee of \$7.50 on a truck of gross tonnage of less than two tons, graduated upward at an increasing rate to \$247.50 for a truck of 15 tons gross weight, Table A7.1, of Appendix A-VII, it appears that the fee is, in major part at least, intended to bear some relation to the load put upon the roads, and possibly in lesser part to the apparent ability of the owner of a commercial vehicle to pay. The higher fees for trucks not equipped with pneumatic tires indicated in Table A7.1 is obviously due to the greater damage that it is believed they would cause to the road surface, increasing in scale as weights increase. The higher fees demanded from trucks not operated by gasoline is obviously to compensate the Government for the loss in fuel tax revenue.

The same observations apply to licence fees for trailers and semi-trailers, Table A7.4, with a range of \$2.00 for one of one ton or less, to \$157.50 for a gross weight up to fifteen tons.

Registration fees for buses are also based on gross weight, 150 lb. being allowed for each seating. Licence fees are generally lower than for trucks of the same gross weight, since for an equivalent net weight of vehicle, the bus

⁵R.S.O. 1937, c. 288.

has a smaller pay-load capacity. Moreover, buses are largely common carrier vehicles and pay an extra mileage tax.

Municipally-owned commercial motor vehicles and trailers are licensed for a fee of \$2.00. The same applies, except as regards buses, where such are operated by a commission on behalf of a municipality. It is not apparent whether reduction in the normal tax is due to the limited extent to which municipal vehicles operate outside their own municipal limits, or whether it constitutes a minor subsidy granted by the Province to the local governments. If the former, the owners of private vehicles, locally operated, have reason for complaint, if the latter, the exemption of motor buses operated by a commission is in principle anomalous.

There is no limitation of the number or type of the vehicles that may be licensed by any individual or corporation.

7.6—Licensing of Common Carrier Operation. No person may operate as a carrier of passengers or freight for gain outside the limits of urban municipalities unless licensed so to do by the Department of Highways.

Apart from minor exceptions, the transport of passengers and the transport of freight by motor vehicle have not up to the present in Ontario been carried on by the same operator. The two operations appear to be distinct. They are conducted and regulated under the provisions of separate statutes, and have attained entirely different stages of regulation, stabilization, and relationship with other carriers.

Common carrier passenger buses are given the name "public vehicles" under the Public Vehicle Act,⁶ first passed in 1923. By that Act, the issue of licences for the operation of public vehicles is subject to regulations prescribed by the Lieutenant-Governor in Council. The regulations in current effect were approved by Order-in-Council March 14, 1936.

Since the transport of human freight is involved, the regulation and licensing of passenger services very naturally preceded the regulation and licensing of freight services and has attained a state of development that is envied by those engaged in the transport of goods for hire.

The danger to human life and the dire effects of direct competition for passenger traffic were so soon and so strikingly apparent that, almost from the beginning of bus operations in Ontario, public opinion was on the side of regulation. Licences were granted to operators already in business, provided that they conformed to certain minimum conditions respecting vehicles and service. Mergers and absorptions of lines followed as a natural consequence. No new operating licences were granted over routes already served, and the influence of the Department was directed to eliminate direct competition.⁷ Such has been accomplished. It was repeatedly asserted before the Commission, and at no time denied, that bus operations, at any rate so far as relations between the various licensees were concerned, could give no cause for complaint, or occasion for criticism.

With a view to extending public control over commercial vehicles operating for hire it was enacted, in 1933, that as a prerequisite for the granting of a licence, the applicant must obtain from the Ontario Municipal Board a certificate of public necessity and convenience. This condition was made to apply to

⁶R.S.O. 1937, c. 289.

⁷Brief of Gray Coach Lines, Ltd., p. 8.

both public commercial vehicles⁸ and public vehicles.⁹ If a certificate is issued, the Department of Highways may or may not grant a licence for the offered service. Legally, its discretion in respect of the issuance of permits is unfettered. In actual practice it conforms to three basic principles, namely:¹⁰

(a) Permitting one licensee to provide all local service between two main points.

(b) Continuance of a licence to an operator who provides a service in conformity with all statutory and departmental regulations.

(c) Where a licence is transferred, granting preference under equality of conditions to an operator already providing service in the district.

The relative stability of public vehicle operations under the above policy is well exhibited in the statistics of numbers of licences issued to public vehicle operators. According to Table 5.1, of Chapt. V, these numbered 216 in 1925; 587 in 1929; 494 in 1933; and 754 in 1937.

In striking contrast are the numbers of public commercial vehicle licences issued in the same years. These were, from the same table:

1925—No licence required.

1929—913 motor vehicles; 205 trailers.

1933—3301 motor vehicles; 932 trailers.

1937—5500 motor vehicles; 1392 trailers.

Lacking the human aspect, freight transport operations have continued practically unregulated, though any person carrying on a freight transport business must be licensed.

The Public Commercial Vehicle Act was first passed in elementary form in 1927. Much enlarged, it was re-enacted in 1934, and again, as the Commercial Vehicle Act, in 1936.¹¹ Regulations made in conformity with the latter Act were approved by Order-in-Council of February 22, 1936.

The requisite certificate of public necessity and convenience may be issued by the Ontario Municipal Board with or without a public hearing. Where a public hearing is held, it has generally been of an informal nature.

There is no evidence before the Commission that the Board had ever shown partiality or bias, but there were assertions of holders of existing licences that notices of hearings that they had received were not sufficiently explicit or detailed to permit the recipient of such notice to judge the effect of the granting of the application upon his interests.¹² Complaints were also voiced that witnesses before the Board were not heard on oath, and that in dealing with applications too much weight was given to resolutions of municipal councils, business associations, and letters from possible customers.

The history of licensing public commercial vehicles in Ontario up to the present discloses definite assignment to a licensee of a specific territory within which he will be permitted to carry on his operations. The Commission entirely concurs in this policy. As a result of it, there is a total absence of the "tramp trucker" and of the extreme abuses that have attended such difficulties of operations in other jurisdictions. There is fortunately no form of licence issued in Ontario which permits a trucker to carry a load, say, from Toronto to St. Catharines; to find there a load for Owen Sound; at Owen Sound to find a

⁸S.O. 1933, c. 49.

⁹S.O. 1933, c. 53.

¹⁰Brief of Ontario Association of Motor Coach Operators, p. 11.

¹¹S.O. 1936, c. 9.

¹²Evidence, p. 2099.

load for Belleville; at Belleville to find one for Ottawa, and so on, possibly not returning to his home base for weeks at a time, living and sleeping in his truck during the whole period.

On the other hand, differentiation in licences has been carried very far. Much criticism was given in evidence before the Commission as to unnecessary or unfair limitations placed upon certain classes of carriers, and on the other hand the unfair privileges allowed to other classes.

7.7—Classification of Public Commercial Vehicles. Seven classes of public commercial vehicle licences are issued. While not so grouped under the regulations, they will for purposes of comparison be grouped in three categories. For each vehicle so licensed a P.C.V. licence fee is payable, in addition to the ordinary commercial vehicle licence, as indicated in Tables A7.1 to A7.4 inclusive.

(1) *Common Carriers.*

Common carrier vehicles are those licensed to carry any class of goods in any quantity offered for transport over a specific route between specific points and whether any load contains the goods of one person or any number of persons. The essence of such operation is a more or less regular scheduled service.

Under the existing regulations there are two classes of vehicles, "A" and "B", belonging to the category of common carriers. These are defined as follows:¹³

Class "A"—Any Public Commercial Vehicle operated over a regular route on The King's Highway or to a point *not* on the King's Highway.

Class "B"—Any Public Commercial Vehicle operated over a regular route from or to a Home Terminal *not* on The King's Highway or between points *not* on The King's Highway.

The distinction between these classes is largely in the licence fee collected. Subject to a common minimum of \$10.00, the licence fee for Class "B" carrier vehicles is one-half that prescribed for Class "A" vehicles (Table A7.1 and A7.2).

(2) *Private or Contract Carriers.*

Private or contract carrier vehicles are those licensed to carry one person's goods only on any one trip. Possible trips are limited by the fact that the goods carried must be either picked up or delivered in the municipality in which the carrier's head office is situated, or in other specific places mentioned in his licence. The two classes, "C" and "D", are defined thus:

Class "C"—Any Public Commercial Vehicle operated for the transportation of goods belonging to one person only on a trip from or to the Home Terminal of the operator, or such other place or places as may be named in the licence of the operator.

Class "D"—Any Public Commercial Vehicle operated under contract filed with and approved by the Department for the transportation of goods and vehicles designed or used exclusively for the transportation of a particular type of goods.

¹³Regulations Respecting the Licensing of Public Commercial Vehicles, approved by Order-in-Council, 22nd February, 1936.

The specification for Class "D", as given, is ambiguous and was subject to much criticism before the Commission.¹⁴

Licence fees payable for Class "C" or "D" vehicles are the same as for Class "A" vehicles.

(3) *Special Licences.*

Special licences relate to vehicles restricted to the carriage of one type, or a limited number of types, of goods or products. Under the regulations, there are three of these, Classes "E", "F" and "H", the characteristics of which are as follows:

Class "E"—Any Public Commercial Vehicle operated for the transportation exclusively of milk or cream.

These vehicles are common carriers in that the produce carried on any trip may be owned by several different owners.

Class "F"—Any Public Commercial Vehicle operated exclusively for the transportation of livestock, road construction materials, bricks, cement blocks, coal or rough lumber. The foregoing enumeration of Class "F" carriers shall be deemed partial, and shall not operate to exclude the transportation of other such materials which are within the general terms of this section.

While these vehicles have the privilege of common carriers, being authorized to carry more than one person's goods at one time, the carriage of low-grade commodities in bulk is their special privilege. They are not specifically limited to prescribed routes or terminals. This classification, as well as Class "E", is more particularly designed to serve the rural population.

The P.C.V. licence fee for any vehicle licensed in Class "E" or Class "F" is \$1.00 (Table A7.3).

Class "H"—Any Public Commercial Vehicle operated exclusively for the transportation of uncrated used household goods, furniture and fixtures.

Transportation of goods is only part of the service rendered by the operators of Class "H" vehicles. The business of long-distance movers entails special vehicles and special problems of transport, making exceptions in normal regulations necessary. These are discussed in Art. 11.11. The Department reserves the right to grant "H" licence privileges to "A", "B", "C" or "D" carriers where insufficient "H" carrier service is available, but without special written permission of the Department no operator other than a Class "H" operator may transport uncrated used household goods, furniture and fixtures.

The fee for a Class "H" license is the same as for a "B" license, that is, except where the minimum fee controls, one-half that prescribed for Classes "A", "C" or "D" (Table A7.2).

7.8—Present Licence Fees. The fees in force since January, 1938, for motor vehicles engaged in the transport of goods, are set out in full in Tables A7.1 to A7.4, inclusive, of Appendix A-VII. Since much of the evidence coming before the Commission was on the basis of the fees in force during 1936 and 1937, it is important to note that present commercial motor vehicle fees are 25 per cent lower than those in effect from 1933 to 1937, or, otherwise put, the earlier fees were one-third higher than the present ones. Public commercial vehicle fees as prescribed by Order-in-Council, February 22, 1936, continue in

¹⁴Evidence, pp. 3790-2.

force. The licence year for commercial vehicle licences has been the calendar year; for public commercial vehicle licences, the fiscal year. Beginning with 1939, all licences will run uniformly from April 1st to March 31st.

A graphical analysis of the extent to which revenue is derived by the Province from various forms of licence and from the motor fuel tax is presented in Fig. 4.

Public Vehicle Mileage Tax. Public vehicles in Ontario pay, instead of a flat licence fee, mileage fees as follows:¹⁵

One-twentieth of one cent per passenger seat per mile for mileage travelled over highways under the jurisdiction of the Department of Highways.

One thirtieth of one cent per passenger seat per mile for mileage travelled over highways under the jurisdiction of the Department of Northern Development, or any township or county council, or any suburban or other commission, other than the Niagara Parks Commission.

Licence Fees in Other Jurisdictions. While the Commission has examined the schedules of licence fees for the various Provinces of Canada and for the United States, it does not believe that any useful purpose would be served in presenting an analysis of them. The problem in Ontario must be solved by Ontario in its own way to meet the particular conditions existing in the Province and in conformity with its own traditions and experience.

SECTION 3—TAXES IMPOSED ON MOTOR TRANSPORT

7.9—The Motor Fuel Tax. *Existing Legislation.* As is evident from Table 12.10, the motor fuel tax has for several years past represented considerably more than half of the revenue derived from motor vehicle operation. The Gasoline Tax Act first came into force in the Province of Ontario on May 11th, 1925. Its intent and the various modifications that have been made in it with the passage of the years are set out in Art. 4.12.

Under regulations made in accordance with the Act, the tax is refunded when the fuel is not used by motor vehicles, and although with the revision of 1936 the clause citing the purpose of the act was omitted, the refund of the tax is still made to all users of "gasoline" for other than highway locomotion.

The Gasoline Tax in the United States. The gasoline tax originated in the Western States. As early as 1919 a one-cent gasoline tax was in effect in three States, North Dakota, Oregon and Colorado. In 1937 three States collected seven cents per gallon; one, six and one-half cents; five, six cents; ten, five cents; eighteen, four cents; ten, three cents; two, two cents. These rates are those levied by the States. Federal, county and municipal gasoline taxes are not included. It is to be remembered that a tax of seven cents per United States gallon is the equivalent of 8.4 cents per Imperial gallon and that five cents per United States gallon is the equivalent of six cents per Imperial gallon. That is to say, in nineteen States the state tax is the same or higher than the present gasoline tax in Ontario. If the federal tax of one cent be added, as it rightly should be for a fair comparison, the gasoline tax is higher in nineteen States than in Ontario, practically the same as Ontario in eighteen others, and less in the twelve remaining States.¹⁶

¹⁵Regulations Respecting the Licensing of Public Vehicles. Approved March 14th, 1936, Sects. 9 and 10.

¹⁶Facts and Figures of the Automobile Industry, 1937 Edition, p. 33.

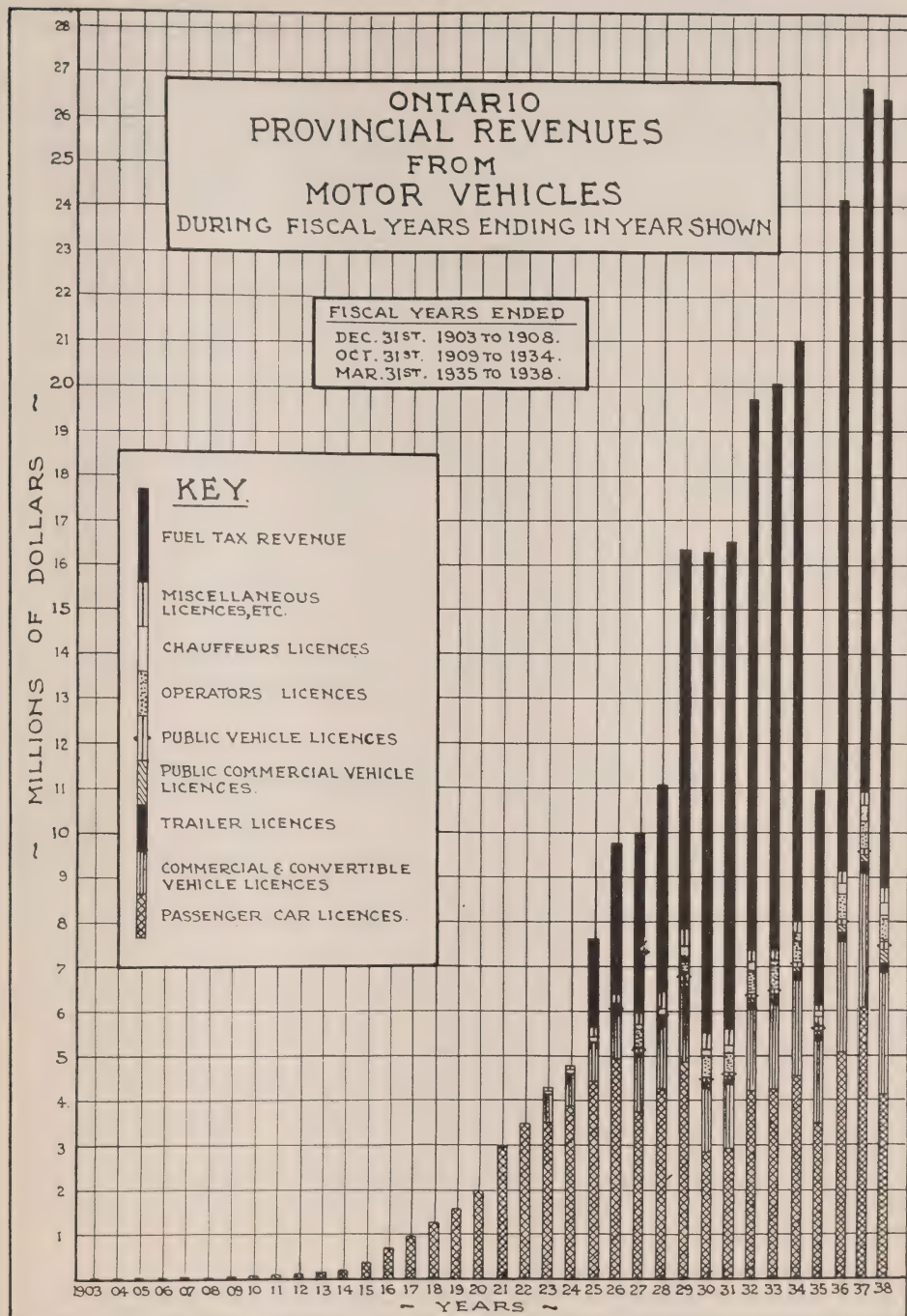


FIG. 4—Analysis of Ontario Provincial Revenues from Motor Vehicles.

In fifty representative cities of the United States, the average tax (state and federal) was 5.35 cents in 1936, having remained virtually constant since 1933. This average tax is equivalent to 6.42 cents per Imperial gallon.¹⁷

The Gasoline Tax in Canada. The gasoline tax was introduced in Canada by Manitoba and Alberta in 1923 and in Prince Edward Island in 1924. Quebec and British Columbia followed suit, as did Ontario in 1925, and Nova Scotia and New Brunswick in the following year. Saskatchewan established the tax in 1929. Present rates in the various Provinces are as indicated in Table 7.1.

**Table 7.1—Present Rates of Motor Fuel Tax
and the Dates of Their Adoption**

Province	Present Rate, Cents per Imperial Gallon	Date of Adoption of Present Rate
Alberta	7	Apr. 1, 1935.
British Columbia	7	Apr. 18, 1932.
Manitoba	7	May 7, 1932.
New Brunswick.....	10	Mar. 21, 1938.
Nova Scotia	10	Mar. 15, 1938.
Ontario	6	Mar. 25, 1932.
Prince Edward Island	10	Sept. 1937.
Quebec	6	Dec. 17, 1931.
Saskatchewan	7	Apr. 1, 1935.

The motor fuel tax in Great Britain is, compared to Canadian and United States standards, very heavy (ninepence per gallon) and the same is the case on the continent of Europe.

7.10. Other Taxes Borne by the Motor Transport Industry. Under Section 1(b) of the Order of Reference, the Commission was required to compare taxes, licence fees or other charges imposed by any taxing authority upon the owners or operators of commercial motor vehicles, including buses operated for gain. Section 2 required the Commission to compare these with the taxes, fees and other charges imposed upon any other mode of transportation by rail, water, or air. No evidence having been heard from water or air carriers, the Commission had to limit its comparison to motor transport and rail carriers.

The total imposts paid by seven representative public commercial vehicle operators, expressed as percentages of the respective company's gross revenue for 1936, are shown in Table 7.2.

It is quite apparent from Table 7.2 that there is little consistency in the tax ratios. A high proportion of pick-up and delivery trucks will increase the motor fuel tax ratio and decrease the P.C.V. licence ratio. Such ratios as those for municipal licences and business tax vary with the practice in various municipalities. Similarly, the amount of provincial corporation tax depends upon the financial structure of the individual company, while income tax is dependent upon profit.

From the above, it would appear that fuel tax and licence fees together average about 8.79 per cent. of the revenue of a P.C.V. operator, and all normal general purpose taxes about 0.99 per cent. Only a small proportion of the operators own real estate, apparently preferring to rent their warehouses.

¹⁷*Ibid.*, p. 50.

Table 7.2—Taxes Imposed on Seven Representative Public Commercial Vehicle Operators, Expressed as a Percentage of Gross Revenue

Identification Number of P.C.V. Transport Company	Motor Fuel Tax	Motor Vehicle Licence	P.C.V. Licence	Municipal Licence	Realty Tax	Municipal Business Tax	Provincial Corp'n Tax	Dominion and Provincial Income Tax	Total
5	4.21	3.21	1.60	....	....	0.09	....	1.36	10.47
8	4.29	3.56	1.50	0.11	....	0.15	0.34	....	9.95
9	4.47	3.20	1.31	....	....	0.61	0.29	....	9.88
10	4.93	2.99	1.31	....	....	0.15	....	....	9.38
13	5.00	2.52	1.02	....	0.02	0.09	0.05	0.40	9.10
14	4.43	3.07	0.97	....	0.18	0.03	0.12	0.28	9.08
16	3.62	3.47	0.83	0.07	0.52	0.13	0.13	1.70	10.47
Arithmetical Average	4.42	3.15	1.22	0.03	0.12	0.18	0.13	0.53	9.78

The same applies in as great measure to public vehicle companies. With respect to the six major public vehicle licensees in the Province of Ontario, representing a preponderant proportion of all public vehicles licensed, only 2½ per cent. of their physical assets represents real property, subject to municipal taxation. Miscellaneous taxes of every character, other than "highway taxes," amounted to 1.14 per cent. of these six companies' gross revenue in 1936. Rents represented 4.04 per cent. of the total revenue, of which some part represents municipal taxation. "Highway taxes" that is motor fuel tax, licence fees, and seat tax represented 9.59 per cent. of gross revenue. It will be noted that these averages are approximately 10 per cent. higher than the comparable averages for public commercial vehicle operation.

7.11—Taxes Paid by the Railways. Expressing taxes as a ratio of gross revenue, the Canadian National Railways paid 2.67 per cent. in 1936 and the Canadian Pacific Railway, 3.12 per cent. The figures cited are for all of Canada, since no comparable figures are available for Ontario. Total taxes paid in Ontario by the Canadian railways in 1936, according to a statement filed with the Commission, amounted to \$3,167,376. No comparable figures were submitted, or could be deduced, for steamship or air transport.

Gray Coach Lines, Ltd., in its brief contended that motor coaches pay more than their equitable share of motor vehicle imposts and, after specifying the levies made, dismissed the question of general taxes as follows:

"There are also, of course, municipal corporation and property taxes which are not applicable directly to highway maintenance, but are part of the general costs of service."^{17a}

The Automotive Transport Association of Ontario in its submission made no complaint as to its obligation to pay general taxes.

"The highway transport industry pays general taxes, as do the railways and shipping companies. Such general taxes are realty tax, business tax, and income taxes, Provincial and Dominion."¹⁸

While both the Automotive Transport Association and the Ontario Association of Motor Coach Operators were outspoken during the inquiry as to the number and burdensomeness of the taxes imposed upon the motor transport industry, the protest was, in effect, directed entirely against the alleged disproportion of the imposts on various forms of transport. By no witness before the Commission, or in any brief submitted to it, was any suggestion made that the motor transport industry should be relieved from its fair share of any form of general taxation.

The tenor of the evidence and submissions regarding taxation was to the effect that, first, the distribution of motor vehicle taxation was not equitably assessed amongst the various classes called upon to pay, and, second, that such special motor vehicle taxation should not be expended otherwise than on roads. There was great difference of opinion expressed as to what roads should benefit.

The Commission does not feel that it is called upon under the Reference to make any suggestions or recommendations concerning taxation outside the field of specific imposts on the operation of motor vehicles. The Commission does not regard the levies on motor vehicles through the motor fuel tax and through licence fees in exactly the same category as a tax on real estate, capital investment, or net income. Nor do the operators of motor transports, or of public vehicles, nor, it may be said, does the general public so regard it.

^{17a}Brief, p. 17.

¹⁸Brief, Automotive Transport Association, February 23, 1938, p. 15.

7.12—Divergent Views on Motor Vehicle Taxation. The existing chaos in the motor transport industry more than once manifested itself during the inquiry in inconsistencies in the various submissions of the Automotive Transport Association and in divergent opinions of its member companies. One example of such is seen in the attitude taken toward provincial imposts on motor vehicles, including the fuel tax.

In its submission dated February 23rd, 1938, the Automotive Transport Association stated:¹⁹

"But highway transport in this Province is taxed severely over and above the other forms of transport in that it is subject to gasoline tax and to P.C.V. and commercial licence fees."

"It is obviously inequitable to subject one form of transportation to grossly discriminatory taxation."

Against this it was contended on the part of the railways that the levies on motor vehicle traffic are in the nature of a rent or service charge for the upkeep of the roads by the Province, and are more comparable to the costs of maintenance-of-way of the railways.

This idea was specifically agreed to in principle by Mr. Gutmann²⁰ and by Mr. Teakle,²¹ the representatives of important transport companies, and was not repudiated by any witness.

Mr. Martin, head of Martin Transports, Ltd., gave in evidence as his opinion that it was proper for motor transports to pay toward the construction, maintenance and policing of the roads, nor did he object to the principle (without specifying the method) of having to pay a fair share towards defraying the costs of general government.²² He was opposed to any tax charged for the privilege of doing business, but was quite prepared to pay an additional P.C.V. fee to cover the cost of filing rates, *etc.* in their specific interests.²³

Mr. Lewis Duncan, Counsel for the Automotive Transport Association, without at the time defining the highways he had in mind, went on record that he "thought it quite reasonable that the gasoline tax should be levied for the construction of highways."²⁴

Mr. E. C. Drury, giving evidence for the Automotive Transport Association, gave as his opinion that it would be perfectly fair to charge against the motor vehicle the total provincial expenditure on roads, including those in the Northern areas since the institution of the new highway system (by his Government) in 1919.²⁵ While he admitted that the wide distribution of motor vehicles provided the broad base necessary for a general tax,²⁶ he was nevertheless emphatically opposed to such, stating that "if we went to the extent of making motor vehicles responsible for the expenses on the roads we have gone as far as any precedent would justify us in doing."²⁷

As pointed out by Mr. Joseph Singer, counsel to the Commission, some proportion of the gasoline tax in the United States is frequently earmarked for other purposes than roads, and, on the other hand, substantial sums are obtained

¹⁹Page 15.

²⁰Evidence, p. 3344.

²¹Evidence, p. 3731.

²²Evidence, pp. 4341, 4388.

²³Evidence, pp. 4316, 4319.

²⁴Evidence, p. 4325.

²⁵Evidence, pp. 6846-8.

²⁶Evidence, p. 6877.

²⁷Evidence, p. 6915.

elsewhere, particularly from federal subsidies, to meet in their entirety state expenditures on roads.²⁸

This Commission has elsewhere stated its opinion in this matter. It looks upon the amounts levied on the operation of motor vehicles as a toll to meet the cost of the special facilities provided for their use and as taxes to no greater extent than postage on letters is a tax.

SECTION 4—SUGGESTED CHANGES IN PRESENT LICENSING AND IMPOSTS

7.13—General Objectives. In recommending changes in the existing scale of licence fees, as in that of the motor fuel tax referred to in Section 6, two objects have been kept in mind. The first is to eliminate certain unevennesses in the licence fees charged to the various classes of motor vehicles so as to leave no room for unfair competition or just complaint from this source. The second is to secure to the Province the revenue required to meet fully the obligations assumed by it, and yet to be assumed, in providing roads of the standard and extent necessary to meet reasonably the demands of motor traffic. The extent to which the Commission believes the cost of roads should be borne by motor vehicles is set out at length in Chapt. XIII.

7.14—Basis of Motor Vehicle Taxation. The very satisfactory nature of the motor fuel tax, both with respect to the receipts therefrom, the ease of collection and relative ease of payment by the purchaser; the fact that gallonage of fuel used by a vehicle of a given class or weight bears an approximate relation to the use made of the roads; and the further fact of its general acceptance by the motor vehicle public as being in payment for the roads provided them, all lead the Commission to recommend the motor fuel tax as the basic source of revenue for roads. Adjustments for differences in gross weight and in the demand on the resistance of the pavement may be made in the relative licence fees charged.

The Commission believes that the annual licence fees should be based on the gross weight of the vehicle, since this is one consideration not fully provided for in adopting a fuel tax as the basic tax on motor vehicle operation. It accepts in principle the thesis that heavy vehicles should pay more in proportion to their weight than lighter vehicles, for the following reasons:

(1) Because the fuel tax imposes a lesser burden per ton-mile on the heavier vehicles than on light vehicles and an increasing gross tonnage tax tends to equalize the tax on a ton-mile basis over all vehicles.

(2) Since the destructive force of moving vehicles on the road surface and foundation increases more or less in proportion to the square root of the applied maximum wheel load.

(3) Since it would offset in a measure the tendency to introduce larger and larger vehicles solely for private gain, despite the resulting interferences with the uses of the public highways enjoyed by them in common with other vehicles.

To an increasing extent gross weight is being used as the basis for licensing in other jurisdictions.

7.15—Unfair Results of the Present P.C.V. Licence System. The Commission is convinced that the complaints²⁹ of the P.C.V. operators, and particularly of those with Class "A" licences, that they should not be charged fees very much in excess of those paid by private carriers is justified. Several operators

²⁸Evidence, pp. 9897-9912.

²⁹Evidence, pp. 2082-6, 2416-7, 2987-8, 3558-3559A, 3741-2, 3752-8, 4316-8, 4501-2.

gave evidence to the effect that their understanding of the purpose of the additional P.C.V. licence fee was to reimburse the Government for the expense of the additional policing required in connection with the regulations to be issued under Part III of the Commercial Vehicle Act, particularly with respect to the filing of tariffs and the policing of them.³⁰ None of these regulations have been issued up to the present time.

If it be granted that this was the purpose of the P.C.V. licence fees, it is difficult to understand on what ground the fee should geometrically advance with the licensed gross weight of the vehicle licensed.

On the other hand, if the P.C.V. licence was instituted primarily for purposes of revenue, the Commission desires to express its conviction that revenue taxes on motor transport or any other business should not be collectible by means of licences issued by the Department of Highways.

The Commission has given much thought to the question of licensing. It is quite apparent from the evidence that rates, and consequently wages, of P.C.V. operators have been kept depressed by the fear that steady customers with substantial tonnage would organize their own truck service if rates were raised above the cost of providing the service in that manner. The fact that a private firm is not required to pay P.C.V. licence fees gives it definite advantage in forcing lower motor transport rates.

The revenue from P.C.V. licences is relatively small, being less than 2 per cent of the motor fuel tax revenue. On the other hand, it appears to be substantially more than would at present be required for any special administrative services in connection with P.C.V. operations.

The Commission desires to express its disapproval of the practice in many States of taxing the carriers a percentage of their gross intake, believing it undesirable for the Department of Highways to be interested in any way in the extent of the transport business as a business. It must preserve an unprejudiced viewpoint in matters of common concern. As was pointed out in evidence, such a tax bears no relation to the use of the highways.³¹

Further, the Commission is of the opinion that the obligations assumed by motor transport operators to provide service, particularly on the part of Class "A" operators, offsets to a very large extent the value of any special privileges they may enjoy. The Commission concurs in the opinion of Mr. Martin as expressed in evidence in this connection.³² But certain expenses are placed upon the Government in connection with regulations and policing occasioned by the privileges granted and these expenses will be increased if the Commission's recommendations are adopted. Manifestly, it is proper that the industry should be assessed for them.

7.16—Contingent Reasons for Low P.C.V. Licence Fees. The question of the basis of issue of P.C.V. licences has been discussed in Art. 7.6. There was general agreement amongst Class "A" operators that too many licences had been issued, but no operator was prepared to advise the cancellation of any now in force.

It was the general consensus of opinion, however, that licences should lapse if an operator went bankrupt, unless revived after a proper hearing before the regulatory Board on the basis of public necessity and convenience.

³⁰Evidence, p. 4316.

³¹Evidence, p. 4727.

³²Evidence, p. 4318.

Possibly the fact that existing fees for P.C.V. licences are of substantial amount, has resulted in an apparent unwillingness on the part of the Province to cancel P.C.V. rights on the bankruptcy of their holder. Conversely, the payment of substantial P.C.V. licence fees at one time is a heavy obligation, showing when paid as a substantial asset in the operator's accounts.³³ This is one reason why nominal fees are recommended.

It is also recommended that upon the bankruptcy of any operator, his P.C.V. operator's licence terminate, and his P.C.V. vehicle licences also cease unless the vehicles are taken over by a P.C.V. operator. A P.C.V. operator's licence so extinguished would not be reissued without a hearing before the Board of all parties interested, after proving public necessity and convenience.

Mr. Sylvester, for Wm. Winters Transport, was emphatic as to the injustice of perpetuating P.C.V. licences that have proved in practice to be unnecessary.³⁴

7.17—Public Vehicles. The chief, if not the sole, cause of complaint of the operator of public vehicles, that is buses for hire, against conditions as they exist was with regard to the licence fees and seat-mile tax that they are called upon to pay. These, they alleged, were excessive and out of line with what is demanded of other users of the highway.

Comparisons of public vehicle imposts submitted were entirely between total highway taxes paid by such vehicles in Ontario and in other jurisdictions, and between public vehicles and automobiles. Highway taxes paid by motor coach operators controlling 72 per cent. of the interurban coach operations in Ontario indicated that highway taxes per coach-mile in 1936 averaged 2.57 cents.³⁵ From the available records of seven P.C.V. operators whose total annual mileage slightly exceeded four million miles, the average taxes paid were 2.17 cents per truck-mile.

According to the census of truck traffic made by the Department of Highways, November, 1937, the average gross weight of P.C.V. trucks passing over the Welcome scale was 6.227 tons, and over the Dundas scale 5.633 tons, or an average gross weight of nearly six tons. Highway taxes on P.C.V. trucks would hence be about 0.36 cents per ton-mile. If these had been private trucks with no P.C.V. licence fee to pay, the taxes paid per ton-mile would have been 0.31 cents, or thereabouts.

The gross weight of a 29-seat coach is given as 19,050 lb.,³⁶ or the highway taxes per coach ton-mile are 0.27 cents on the basis of full load and 0.30 cents on the basis of the average condition of half the seats filled. On the bases of this study it would not appear that there is discrimination against the public vehicle with respect to taxes.

In comparison with private motor cars, it was shown in the written submissions of both the Ontario Association of Motor Coach Operators and of Gray Coach Lines, Ltd., that the average motor coach pays in highway taxes some 18½ times the average highway taxes paid by all types of vehicles in Ontario, and obviously a considerably higher ratio to the taxes paid by private automobiles.³⁷ On the other side of the picture it was deduced from statistics given in the submission mentioned that the highway taxes paid per bus pas-

³³Evidence, p. 3575.

³⁴Evidence, pp. 4399, 4419.

³⁵Brief of Ontario Association of Motor Coach Operators, p. 13.

³⁶*Ibid.*, p. 13.

³⁷*Ibid.*, p. 13.

senger-mile were less than the highway taxes paid per automobile passenger-mile.³⁸ On the basis of the data furnished by Gray Coach Lines, Ltd.,³⁹ which give results more favourable to the coach, total highway taxes are computed as follows:

Unit	Highway Coach	Private Automobile
Coach-mile	3.083 cents	0.488 cents
Seat-mile	0.106 cents	0.098 cents
Passenger-mile	0.199 cents	0.248 cents

Assuming an average operating gross weight of 17,000 lb. and 3,000 lb., respectively, the total tax per coach ton-mile is 0.363 cents and the total automobile tax per ton-mile is 0.325 cents.

More definite comparisons were made as to highway taxes imposed in other jurisdictions.⁴⁰ Ontario taxes on public vehicles are slightly higher than those in Quebec or New Brunswick, and substantially higher than those in the states bordering on Ontario.

From the comparison given above on a gross ton-mile basis, or on a per passenger basis, it does not appear that the total imposts on the motor coach are materially out of line with those imposed on other users of the highways.

However, from the fact that public vehicles are called upon to pay a special mileage tax peculiar to their operation, some basis for complaint on the ground of discrimination may exist.

7.18—The Status of the Motor Fuel Tax. It is manifestly within the discretion of the Legislature to impose a tax on sales of any or all motor fuels comprised under the definition of gasoline in the Act for the purpose of general revenue, or to earmark all or any part of that revenue for any particular purpose it sees fit. It is the claim of the Department of Highways that the proceeds of the Gasoline Tax Act have been earmarked for highway purposes by having equivalent sums credited to the Highway Improvement Fund Account.⁴¹ In that view the Commission concurs, but it does not accept the view expressed by interested parties⁴² that only road expenditures in the southern part of the Province should be debited against such account, notwithstanding that such practice prevailed for many years, due to the presence of two road building departments in the provincial organization. Every road in the Province is open to every motor vehicle and such vehicles are found on every one of these roads that is passable. So far as motor traffic is concerned, the Province is one and indivisible.

The Commission recommends that so long as the motor fuel tax is collected from motor vehicle owners only, the monies collected be spent on road improvements or the retirement of provincial debt for road improvements, irrespective of where within the Province such expenditures were made, or such debt incurred.

Motor Fuel Tax the Most Acceptable Impost. The Commission is of the opinion that the motor fuel tax offers the most equitable and the most willingly paid motor vehicle tax.⁴³ It is easily collected and readily controlled. The amount to be paid at any one time is at the entire option of the payer. Within a given class of vehicle, the tax bears in proportion to the miles travelled over

³⁸Evidence, p. 8506.

³⁹Brief, pp. 19, 20, 21, 30.

⁴⁰Brief, Ontario Association of Motor Coach Operators, p. 14.

⁴¹Answer by Department of Highways to Question 32 of Commission's questionnaire.

⁴²Evidence, pp. 8959, 9124, 9495.

⁴³Evidence, pp. 3575, 3685.

the highways and to some extent in proportion to the speed attained. As between different weights of vehicles, the tax falls with increased burden per mile travelled on the vehicle of the greater gross weight.

No representation was made to the Commission from any quarter that the motor fuel tax was other than a just and equitable tax. Much opposition was expressed to special public commercial vehicle and public vehicle taxes as being inequitable,⁴⁴ and the necessity of paying licence fees in full rather than in instalments was represented to be a hardship.⁴⁵

7.19—Tax on Diesel Engine Fuel. There was no very clear evidence given before the Commission as to the saving in motor fuel tax effected by the use of Diesel fuels. Speaking very broadly, a Diesel-powered vehicle is regarded as giving double the mileage per gallon of fuel that a gasoline-propelled vehicle of the same weight gives. It is also known that this general assumption is not always realized in practice. At the same time, a Diesel-powered machine is heavier than a gasoline-propelled vehicle of the same pay-load capacity, and pays higher licence fees on that account. Moreover, it is also more expensive in first cost.

At present, the extra vehicle licence fee charged on Diesel equipment represents around 6 cents to 10 cents per day, depending on the gross weight of the vehicle. On the basis of 150 to 250 miles daily, depending also on the size of the vehicle, this amounts to an additional cost for licence fee of 0.04 cents per mile. Assuming an average of six miles obtained per gallon of gasoline and twelve miles per gallon of Diesel fuel oil, the fuel tax would be 1 cent and ½ cent per mile, respectively. This represents 0.46 cent per mile saved in government imposts by the use of Diesel fuel.

The Diesel engine in motor transport is scarcely past the experimental stage, and the Commission believes that it is advisable to err on the under side rather than be the means of adversely affecting the use and development of a class of power vehicle which may possibly yield great advantage to highway transport generally.

Having regard to these factors, but at the same time to the great need of the Province for revenue to meet road expenditures, the Commission believes that a tax one and one-half times that imposed on gasoline would not be unfair at the present time on Diesel engine fuel. This would still leave a margin to assist the Diesel vehicle to prove its advantages, if any.

7.20—Further General Considerations Affecting Motor Vehicle Imposts. *Comparable Motor Vehicle Imposts in the United States.* In considering motor vehicle taxation in Ontario it is of interest to note that practice in the United States has not run parallel with that in Ontario, particularly in the three following respects:⁴⁶

(1) The great extent to which federal money has been expended on highways, with the resultant measure of control exerted by the federal authority.

(2) The long-standing policy in various states, of earmarking part of the gasoline tax for other than highway purposes.

(3) The extent to which the state expends money on highways within the municipal limits of cities and towns or grants subsidies to such municipal governments for that purpose.

⁴⁴Evidence, p. 4318.

⁴⁵Evidence, p. 3575.

⁴⁶Evidence, pp. 9897-9912.

Effect of Fuel Tax on Tourist Traffic. The American tourist traffic is of great importance to Ontario, having involved an estimated expenditure of \$117,750,000 in the Province during the year 1937. The Commission believes that such is influenced most materially in its extent by the presence of good roads and very little by the level of the gasoline tax. It is not likely that the average tourist automobile travels in excess of 250 miles per day while in Canada, using possibly 15 gallons of gasoline. An extra forty or fifty cents per day per car, when moving, would not, in the opinion of the Commission, have any deterrent effect upon the tourist trade or the amount of money expended by tourists within the Province.

The Commission believes that the American visitor to Canada, whether properly classed as a tourist or as one making use of Ontario Highways only because of the desire to shorten his trip from one point in the United States to another in that country, is quite prepared to pay equally with the Ontario citizen whatever motor fuel taxes are necessary to provide the roads on which he travels.

Desirable Features of a Motor Revenue Policy. On the assumption that highways in Canada are essentially a provincial matter, it follows that the major part of their capital and maintenance costs must be raised by the provincial governments.

This being the case, the Commission is of the opinion that all motor vehicle revenue should be earmarked for road purposes, and, further, that provincial expenditures on roads should be met from such revenue.

The Commission acknowledges the right of the Province to tax motor vehicles or their operation for general purposes. It acknowledges the propriety of expending general revenue on road development in unorganized or tourist areas or on major trunk roads. But it believes that it would be prudent to limit provincial road expenditures to what can be met by the revenue available from road users and to limit taxes payable by them to the requirements of the provincial government for road purposes.

While in accordance with this view the Commission recommends an essentially pay-as-you-go policy as desirable, it recognizes the soundness, in specific instances, of borrowing to permit the completion of major improvements the cost of which will within a brief period be liquidated by wholly new traffic created by the improvement.

SECTION 5—PROPOSED CLASSIFICATION OF COMMERCIAL FREIGHT VEHICLES

7.21—Proposed Transport Vehicle Class. The Commission believes that the time has now come to drop the historic but artificial distinction in the basis of licensing passenger vehicles and commercial vehicles. The doctor's or the salesman's sedan, the grocer's delivery car, and the painter's car with its under-slung ladders are equally commercial vehicles, and all of them on occasion may be pleasure vehicles.

The Commission recommends that all commercial vehicles in excess of 6,000 pounds gross weight, that is, substantially above the weight of normal automobiles, be included in a new classification, termed "transport vehicles." On the basis of the 1937 registration figures, graphically portrayed in Fig. 3, this would include 28 per cent. of all private commercial vehicles and 32 per cent. of all commercial vehicles, passenger as well as freight.

It is the opinion of the Commission that in the interests of safety on the highways, as well as to eliminate unfair and cut-throat competition, all transport vehicles should be restricted to a local zone, unless specially licensed

to go outside that zone, that is to say, a private transport so licensed for long distance operation would have the equivalent privileges of the present Class "C" operator, except that it would be restricted to the carriage of the owner's own goods. There appears to be no necessity of limiting the movements of light trucks, since, except in exceptional circumstances, the utilization of a vehicle of less than 6,000 pounds gross weight on long distance hauls would not be economical. Not making any different demands upon the highways than does the "pleasure" car, there should consequently be no distinction in fees.

7.22—Proposed Changes in Classification of Public Commercial Vehicles. As a result of its study of the situation, the Commission would recommend the following changes in classification of public commercial vehicles and operator's licences:

(1) *Class "A" Common Carriers.* It is recommended that the present Classes "A" and "B" be merged into one group, hereinafter designated as "Class 'A' Common Carriers."

The distinction between the present Class "A" and Class "B" common carriers is essentially one of fees paid. With the reduction in cost of P.C.V. vehicle licences to a nominal sum, the distinction disappears.

Operations under Class "A" licence would involve the conveyance of any class of goods the property of one or more owners on any trip over specified regular routes.

Class "A" service would be a scheduled service, essentially intended to provide transport for small quantities of goods for anyone offering such for transport. In practice, it would be limited to package freight and hence to higher grade products, or to emergency movement of low-grade products in small quantities. Vehicles licensed as Class "A" carriers should be restricted to the conveyance of the classes of freight mentioned.

(2) *Class "C" Contract Carriers.* It is recommended that the present Class "C" and Class "D" carriers be merged to form a group to be designated "Class 'C' Contract Carriers." Operations under Class "C" licence would comprise the conveyance of one persons's goods only on any trip to or from the home terminal (local municipality) of the licensee, and vehicles so licensed would be limited to the carriage of higher grade freight in package form in quantity and whether on a casual trip or on charter or contract service, where the remuneration is based in any way upon the quantity of goods transported or the distance travelled.

It is recommended that the Class "A" licence normally include Class "C" privileges between the registered home terminal and any point within an area described in each "A" licence granted, but for goods of such character only as would be carried in normal "A" operations in lesser quantities (Class A freight). Class "A" licensees should also have the right to provide or arrange for pick-up and delivery services, but not cartage service, anywhere within such area. Cartage service should be subject to municipal licence.

(3) *Class "E".* It is recommended that Class "E" remain as at present, operations under this group being limited to the cartage of milk and cream and empty milk and cream cans.

(4) *Class "F".* It is recommended that Class "F" remain as at present, vehicles licensed under this classification to be reserved for the transportation of livestock, road construction materials, bricks, cement blocks, coal, or rough lumber—in general, low class freight in bulk.

(5) *Class "G"*. It is recommended that a Class "G" be established to take the place of the special vehicle subdivision of the present Class "D". Vehicles under this class would be vehicles specially designed or intended and used only for the carriage of one type of product only, such as new motor cars, or other vehicles or implements, boilers or heavy machinery, individual animals, tank cars for liquids, *etc.*, but excluding vehicles licensed in "E" or "H" classes.

(6) *Class "H"*. It is recommended that Class "H" remain as at present, that is, vehicles exclusively used for the conveyance of uncrated household goods, furniture and fixtures, but with the special privilege, at present limited to used furniture, to be extended, without restriction to Class "H" operators, to include new furniture and fixtures, when set up and uncrated ready for sale or use.

Without special permission no operator other than a Class "H" operator should be permitted to haul the classes of goods mentioned, but this permission should be granted to an "A" or "C" operator, if there are not sufficient "H" operators in any area to provide the needed service.

All of the above classes of licence would be subject to such limitations or extensions of privilege as the Municipal Board or Transport Board might determine when granting them. Unless obviously in conflict with the recommendations herein made, existing practices to meet special conditions should be allowed to continue.

7.23—Through Routing of Semi-Trailers. Having in mind the development of the motor transport industry along logical lines, the Commission believes that the through routing of trailers should not be unduly restricted. The relatively great expense entailed in loading and unloading compared with the actual hauling of goods is developed in Chapt. IX. To through-route motor transport would entail a considerable saving when the points of origin and destination of full loads are in the territory assigned to different P.C.V. operators.

On the other hand, the Commission sees the necessity of strict control over such movements, in order to guard against opening the door to renewed competition and to protect the owners of equipment transferred to other operators.

Accordingly, the Commission recommends that through routing of equipment be limited to semi-trailers only, that the right to haul such through-routed trailers be restricted to Class "A" operators, that it apply only within the zone comprised by the Class "A" licences involved, and only in respect of the operators' own tractors operated by their own employees. Until turned over to and accepted by another carrier for further or return movement beyond his territory, such trailer should, for all the purposes of the law, be deemed to be owned by the Class "A" operator in whose charge it is. All such through-routed trailers should be licensed as public commercial vehicles in Ontario but a trailer so licensed should not be restricted to any specific territory.

7.24—Municipal Cartage Licences. No recommendation herein made is intended to affect the right of a local municipality to license carters conveying any class of goods between two points wholly within such municipality, or to or from a point within a zone three miles beyond the corporate limits of the municipality. Vehicles owned by persons whose common carrier operations are confined within these limits would not require a P.C.V. licence if such vehicle were locally licensed as cartage vehicles by one municipality only.

SECTION 6—RECOMMENDED MOTOR VEHICLE IMPOSTS

7.25—Necessary Revenue to be Raised. The Commission is of the opinion that, provided all motor vehicle revenue is expended on roads, the motor vehicle should rightly assume the responsibility for the payment of the provincial debt for roads, and the interest charges thereon, until the debt is repaid; and that to accomplish this and maintain a progressive programme of road construction for the years immediately ahead, a motor vehicle revenue of nine million dollars per year in excess of that latterly obtained is required. This should be sufficient under a programme of controlled expenditure.

7.26—Increase in Motor Fuel Tax. As representing the basic tax on motor vehicle operation, it is recommended that the tax on gasoline and other internal combustion engine fuels usable interchangeably with gasoline be 9 cents per Imperial gallon; and that on fuel oil and all other similar liquids however produced used as fuel by motor vehicles the tax be 13 cents per Imperial gallon.

7.27—Proposed Changes in Vehicle Licence Fees. The recommendations which follow are made on the basis of the same definitions of motor vehicles and trailers as now used in the Highway Traffic Act. Essentially, these are that a "motor vehicle" is a self-contained power unit not operating on rails, and a "trailer" any separate unit at any time drawn on the highway by a motor vehicle, but excluding farm implements if so drawn.

It is recommended that licence fees be based on gross weight. In the case of freight vehicles this should be the weight of the vehicle plus the maximum load to be carried thereon, but in no case below the reasonable amount which the vehicle is capable of carrying. The licensed gross weight should be plainly painted on either side of the vehicle. No changes in the present stipulations respecting axle loadings are suggested.

It is suggested that the gross weight of passenger vehicles be regarded as the weight of the vehicle plus 150 pounds per seat, including the driver's seat; or if the vehicle is intended to carry standing passengers in normal operation at the rate of 250 pounds per seat. In every case the vehicle should be licensed for the nearest even thousand pounds above the gross weight so computed.

The Commission recommends that as the gross weight of the vehicle increases, the licence fee be increased in greater ratio. On the general basis of allocation of total annual costs to various classes of vehicles outlined in Arts. 13.13 and 13.14, it would suggest for consideration the schedule of normal licence fees for commercial motor vehicles indicated in Table 7.3. There would be applicable to both freight and passenger vehicles equipped with pneumatic tires and utilizing motor fuel subject to the Gasoline Tax Act. A comparison with the present total licence fees for private commercial vehicles and for Class "A," "C" or "D" motor trucks, tractors and trailers (Tables A7.1 to A7.4) is given. The latter fees are the sum of the ordinary commercial licence fee and the public commercial vehicle fee.

The necessity of obtaining revenues to meet annual costs does not, in the opinion of the Commission, permit the complete elimination of basic licence fees as a source of revenue from all vehicles, and while a general increase of such fees for this purpose is not recommended, it is suggested that no further reduction in the general scale of licence fees be made at this time. The fees suggested in Table 7.3 are designed to yield the same total revenue as the various licence fees at present in effect.

Vehicles with other than pneumatic tires might properly be required to pay 20 per cent additional, with a minimum fee of \$10.00.

Vehicles operated otherwise than by fuel subject to the provisions of the Gasoline Tax Act should be required to pay double the above licence fees, with a minimum of \$15.00, or in lieu of such extra amounts, and with the permission of the Department of Highways, one cent per mile of operation.

7.28—Additional Licence Fee for Long Distance Transport Vehicles.

In conformity with Art. 7.21, it is further recommended that all vehicles licensed for gross weights in excess of 6,000 pounds be restricted in their operations to a zone extending twenty-five miles beyond the limits of the municipality mentioned in the licence as their home address, unless licensed as "long distance transport" vehicles, public commercial vehicles or public vehicles.

The annual fee suggested for such long distance registration of private vehicles is \$20.00 per motor vehicle or trailer so registered.

All transport vehicles without exception should have their home address legibly painted on either side and, if licensed for long distance movements, the additional phrase, "Licensed L.D.T.", should be painted beneath the address. The current long distance transport licence plates should be attached adjacent thereto.

The establishment of this division of transport vehicles would much simplify the matter of policing the regulations respecting wages, hours, illicit loads and other operating characteristics. It would tend to minimize the incidental long distance trips of private vehicles, on which there is always a tendency to make the round trip as soon as possible and take a chance on being caught driving for excessively long hours. For a private owner having a legitimate need for long distance hauling, and organized accordingly, the additional fee for such privilege is nominal.

7.29—Additional Public Vehicle and Public Commercial Vehicle Licences.

It is recommended that the seat mileage tax at present imposed on public vehicles be abolished, as well as the graduated scale of public commercial vehicle licence fees, but only in the event that compensation for the reduced revenue is made in the form of an increase in the motor fuel tax as recommended.

All motor vehicles and trailers owned by a public commercial vehicle operator and utilized in his business as such, irrespective of how or where used, would, under the plan proposed, require to be licensed as public commercial vehicles of the designated class or classes, as the case may be. The annual fee suggested for such licence is \$10.00 per vehicle. This fee is intended to be in the nature of a normal registration fee for licensed public operations.

The corresponding fee proposed for each public vehicle licensed is \$20.00.

7.30—Miscellaneous Fees. Upon the setting up of the Transport Board as herein recommended, all applications coming before it for public operator's licences or changes in existing licences, changes in routes, *etc.*, should be accompanied by reasonable application fees in order to discourage frivolous or unwarranted proposals.

7.31—Probable Effect of Changes in Motor Vehicle Imposts. The licence fees proposed in the preceding articles are designed to yield revenue equivalent to that produced by the licence fees now in force, and at the same time to eliminate inequalities in the present scale, particularly the unequal

burden placed upon public vehicles and public commercial vehicles compared with those of private operators, as well as that hitherto subsisting as between motor vehicles and trailers. Weight (and indirectly size) is the single criterion on which these fees are based, and the revenue obtainable from them, other than a nominal amount per vehicle to cover licence plates and administration is allocated in approximate payment of the estimated additional cost of roads occasioned by the presence on the roads of larger and heavier vehicles than the average vehicle making use of them. This feature is discussed in Chapt. XIII. The licence revenue from all sources for the fiscal year 1940 is estimated at \$9,750,000.

It is estimated that three cents additional tax per gallon on gasoline and seven cents additional tax per gallon on fuel oil will yield \$9,000,000 additional revenue from this source in the fiscal year 1940, or a total of \$27,500,000, after allowing for a slight diminution in the rate of increase in fuel consumption due to the increased tax. It is not believed that this will amount to as much as 5 per cent. or be more than temporary. A reduction in anticipated mileage of 921,000,000 miles said to be occasioned by gasoline tax increases in New York, Minnesota, West Virginia and Rhode Island⁴⁷ represented less than three hundred miles per vehicle registered, or something less than three per cent. of the annual mileage. Two of these States are relatively small in area, and it is difficult to determine what any of them lost in the way of gasoline sales to other States after increasing their gasoline tax, or to what extent they had profited at the expense of neighbouring States before increasing the tax. None of the States mentioned showed a decrease in gasoline consumption, and all showed most substantial improvement in revenue.

Estimated highway revenue for the fiscal year 1940 is placed at \$37,250,000, or not quite adequate to meet all expenditures in that year on a pay-as-you-go basis. This favourable condition should be attained in 1941 if construction is kept to the moderate programme recommended.

⁴⁷Canadian Motorist, November, 1938.

Table 7.3—Suggested Schedule of Normal Licence Fees For Motor Vehicles and Trailers With Pneumatic Tires And Propelled by Motor Fuel Subject to the Gasoline Tax Act

(Note—A nominal registration fee of \$20.00 for each private transport vehicle to be operated more than twenty-five miles beyond the limits of its home municipality, and \$10.00 per vehicle used in the business of a licensed public commercial vehicle operator and \$20.00 for each public vehicle should be added.)

All Motor Vehicles and Trailers		Rate Per 1,000 Lb., Applicable to the Max. Weight in the Bracket	Licence Fee, in Dollars	Present Schedule of Total Fees For Commercial Vehicles, In Dollars	
				Private Motors	Private Trailers
(a) Gross Weight, Pounds				P.C.V. "A" "C" and "D" Motors	P.C.V. "A" "C" and "D" Trailers
Up to	1,000	1.00	1.00	...	...
More than	1,000 and up to	1.00	2.00	...	12.00
"	2,000 "	1.50	4.50	7.50	17.50
"	3,000 "	2.00	8.00	7.50	...
"	4,000 "	2.50	12.50	...	...
"	5,000 "	3.00	18.00	...	...
"	6,000 "	4.00	32.00	18.00	30.50
"	8,000 "	5.00	50.00	36.00	56.00
"	10,000 "	6.00	72.00	48.50	44.00
"	12,000 "	7.00	98.00	63.00	76.00
"	14,000 "	8.00	128.00	73.50	99.50
"	16,000 "	9.00	162.00	84.00	115.50
"	18,000 "	10.00	200.00	108.00	132.00
"	20,000 "	11.00	242.00	127.50	166.50
"	22,000 "	12.00	288.00	148.50	192.50
"	24,000 "	13.00	338.00	171.00	231.00
"	26,000 "	14.00	392.00	195.00	261.00
"	28,000 "	15.00	450.00	220.50	292.50
"	"	"	"	247.50	325.50
"	"	"	"	360.00	360.00

(a) Gross weight in the case of passenger vehicles to be the weight of the vehicle empty, plus 150 pounds per seat, or 250 pounds per seat in the case of public vehicles where standing passengers are normally carried.
Gross weight in the case of freight vehicles to be the weight of the vehicle empty, plus the load licensed to be carried, but not less than the reasonable loading for which the vehicle is designed.

CHAPTER VIII

SUBSIDIES

SECTION 1—SUBSIDIES TO MOTOR TRANSPORT

8.1—No Direct Subsidy to Motor Transport. In no case was any instance of a direct subsidy or grant to motor transport by the public authority brought to the attention of the Commission during the hearings. It is possible that aid may have been given to small local bus lines in certain communities, but the aggregate amount of it would be of little importance in the general situation.

8.2—Virtual Subsidy of Motor Transport. Whatever subsidy to the users of motor vehicles exists may be conveniently expressed in the form of relief from an annual interest charge that otherwise would have to be met by the owners of such vehicles. The subsidy may arise either through provincial or municipal expenditures. In either case, it is properly based on accumulated highway debt, but while such has been determined for the Province it cannot be ascertained for the municipalities. Statistics respecting the debt of the latter do not segregate road debt from debt incurred for other purposes.

While, as is pointed out in Art. 12.10, there are grounds for considering the provincial highway debt, and the concomitant subsidy of motor vehicles, as beginning in 1903, it will be considered in the first instance as commencing on November 1, 1918. The great intensification of highway building in Ontario has occurred since then, as is apparent from Fig. 5. It is obvious, of course, that whatever interest charge has been incurred by governmental authority in connection with the financing of work beyond the revenue received should be regarded as subsidy, since it has had to be paid and the motor users, on whom the debt should properly rest, have not been paying it.

As is evident from Table 12.11, a net provincial highway debt of \$212,691,010.28 has been built up from November 1, 1918, to March 31, 1938. Excluding interest accumulations, the actual capital expenditure over the revenue available after meeting net ordinary expenditure in the same period was \$121,957,458.58 (the difference between the total of Columns 2 and 7 in Table 12.11), on which amount interest at $4\frac{1}{2}$ per cent. would be \$5,488,085.61.

In the matter of expenditures by the municipalities, the situation must be appraised in another way. As pointed out in Art. 12.16, neither the municipal debt in respect of roads nor the part of it properly chargeable against the motor vehicle can be ascertained. However, the total expenditure by rural and urban municipalities during the eighteen years and five months from November 1, 1918, to March 31, 1937, was approximately \$325,217,435,¹ or \$17,656,000 as a yearly average. This is an average over the period of \$5.44 per capita per annum in the Province, or nearly double the \$3.00 estimated in Arts. 13.5 and A13.9 (of Appendix A-XIII) as the minimum demanded by social necessity, exclusive of the motor vehicle.

¹Tables 12.7 and 12.8.

Utilizing the figures contained in Table 12.3, it may be shown that all maintenance expenditure for the period mentioned amounted to \$1.73 per capita per annum, leaving \$1.27 per capita available for capital expenditure in the social-necessity quota of \$3.00 per capita per annum, and the whole of the additional \$2.44 in the form of capital expenditure on behalf of motor vehicles.

The Commission is of the opinion that the provincial debt for roads should be repaid by the motor vehicle over a term of years. It sees no alternative to treating municipal expenditures in excess of social-necessity requirements as a direct subsidy to the motor vehicle.

On this basis, the capital subsidy given to motor vehicles approximates \$146,000,000 during the period November 1, 1918, to March 31, 1937. Interest on this amount at 5 per cent., which would appear to be a fair rate to the municipalities, would be \$7,300,000. Such interest constitutes, in effect, an annual municipal subsidy to motor vehicles. Until the provincial debt for roads is being met out of motor vehicle revenue, the total virtual subsidy is therefore close to \$12,800,000.

The amount cited is, of course, in respect of all motor vehicles. In order to allocate the saving to the different classes of vehicles occasioned by the subsidy it would be necessary to determine the proportionate expenditure on the highways for the various classes and estimate the annual contribution to highway revenue made by each. While licence fees are definitely known, it would be necessary to estimate the annual mileage and average miles per gallon of fuel for the different classes of vehicles in order to arrive at the amount of fuel tax paid. Attention is given to the matter of allocation in Chaps. VII and XIII.

Of incidental importance to competing forms of transport is the question of relative incidence of taxation on private motor cars and on commercial motor vehicles. If the latter are not charged the proper amount they will then, in effect, be subsidized by the former.

SECTION 2—SUBSIDIES TO OTHER FORMS OF TRANSPORT THAN MOTOR TRANSPORT

8.3—Subsidies to the Railways in Ontario. In accordance with a statement made by Mr. F. C. S. Evans, on behalf of the Railway Association of Canada, the cash subsidies to all steam railways in the Province of Ontario derived from dominion, provincial or municipal sources up to the present amount to \$54,216,938. This does not include the investment of the Province in the Temiskaming and Northern Ontario Railway, to which special reference is made below. To the amount mentioned should probably be added, although the exact amount is disputed, some \$16,000,000 as the value of certain railway property in Northern Ontario which had been partially completed by the Government or by the predecessors of the Canadian Pacific Railway when the latter entered into the contract to build its transcontinental line. Further, grants of land to the railways in Ontario standing on the records of the Ontario Department of Lands and Forests amount to 2,893,941 acres.² The larger acreage, namely, 3,470,709 acres, cited in the Canada Year Book, 1938, p. 648, will be adopted in the present connection.

It is not easy to set a value for the land at the time of the grant, but, from such information as could be obtained, the Commission is of the opinion that

²Evidence, pp. 8815-8823.

the amount of \$1.00 per acre assigned by the Royal Commission to Inquire into Railways and Transportation in Canada³, is as fair a price as can now be assigned.

On the basis of the above, the total capital subsidies received by the steam railways in the Province would amount to \$73,687,647.

Ontario Government aid to the Temiskaming and Northern Ontario Railway has, for the most part, taken the form of loans not bearing interest. At March 31, 1937, the outstanding debt of this railway to the Province was \$30,207,934.92. The net income for the fiscal year ended at the date mentioned was \$1,369,763.21 and represents 4.53 per cent. on the indebtedness to the Government. Since the rate of return is almost exactly the same as the effective rate now being paid by the Province on borrowings and the net income is available for use in connection with the government property, there is now no virtual annual subsidy to it. The present net investment of the Province in the railway, that is \$30,207,934.92, plus the federal subsidy of \$2,134,080, is less than 40 per cent. of the capital outlay on roads and streets by the Province and the municipalities for the fiscal years 1903 to 1918, inclusive, after crediting all motor vehicle revenue received during the period. Such interest relief as was afforded to the railway in this respect was therefore obviously less than was enjoyed by the users of the highway system made available by 1919 as a result of expenditures made almost wholly out of general taxes.

In order that the present annual value of the subsidies received by the railways might be computed, it is necessary to determine the average interest rate that has been paid in recent years by the railways in respect of securities not carrying governmental guarantee. Statements were furnished by the Canadian Pacific Railway and the Canadian National Railways for the period 1919 to 1937, inclusive, and the securities considered included bonds, debenture stock, note certificates, collateral trust bonds and other securities of similar character. For one of the railways the weighted average rate for the period was 4.87 per cent., while for the other it was 5.02 per cent. It thus appears that an average rate for all the railways of Canada might be taken as 5.00 per cent.

Adopting an interest rate of 5 per cent., the annual interest charge saved by the railways in respect of the amounts received in subsidy, which otherwise would have had to be borrowed, is \$3,684,382.

Due to the impossibility of determining the amount of virtual subsidy applicable to commercial motor vehicles, a sum directly corresponding to the above cannot be cited. As pointed out in Art. 8.2, however, all motor vehicle users in Ontario are being relieved of an expenditure of some \$12,800,000 per annum which they would have had to pay if they had themselves financed that part of highway expenditure in excess of a reasonable social-necessity value.

An advantage often said to be enjoyed by the railways is that they have derived aid from the guarantee of bonds and other securities by the federal and provincial governments, which enabled them to borrow money at lower rates than they would have had to pay if there had been no guarantee. The value of this assistance in any one year would depend upon the amount of such securities outstanding and the difference between the effective interest rate carried by them and the rate applicable to securities issued by the same company without the public guarantee.

On the other hand the users of the highways in Ontario have profited from the fact that all provincial securities issued in respect of them have been against

³Report, 1932, p. 90.

the general credit of the Province and have carried a lesser rate than would have been applied if the financing had been privately done.

It appears probable that the amount of railway borrowing necessitated in respect of railway property in Ontario was not more than that incurred in connection with the public roads and streets of the Province. However, since the amount of neither can be determined with accuracy, the Commission regards the advantage of the guarantee of railway securities as offset by the favourable financing made possible for at least that part of the highway debt incurred by the Province and the financially stable municipalities.

For purposes of general corroboration, the Commission undertook to consider the ratio of the relief in annual interest charges enjoyed by all the railways of Canada in respect of direct subsidies to some important item of railway expenditure that has a counterpart in motor transport. It is not possible to utilize the percentage by which the total annual interest charges of the railways are lessened through their being relieved of interest on sums that they would have had to obtain had the public authorities not granted direct subsidies in one form or another, for the reason that the capital investment of motor transport is not known and the interest charge on it cannot be estimated.

One common denominator, however, is the cost of maintenance of way and structures. Expenditures under this category for the railways of Canada are annually reported in Statistics of Steam Railways of Canada and the corresponding annual amounts expended for maintenance of roads and streets in Ontario are known and are reported in Chapt. XII of this report. Considering the ratio of interest saved by reason of subsidy to the annual expenditures for maintenance of way and structures for all the railways of Canada as applicable to Ontario, further light may be thrown on the relative importance of the virtual subsidy to motor vehicles.

According to the Canada Year Book, 1938, p. 649, the total capital subsidies granted to the steam railways of Canada up to Dec. 31, 1936, in cash, in the cost of lines turned over and in all other forms save land grants, amounted to \$218,977,196. In addition, grants of 47,639,866 acres of land were made. The value of these lands at the price of \$1.00 per acre, already assumed for grants made solely by the Province of Ontario, would be \$47,639,866.

Based on the foregoing considerations it would appear that the railways of Canada have, as a result of government subsidies, been better off each year to the amount of the interest on \$266,617,062 that they otherwise would have had to borrow. The interest on this at 5 per cent. would be \$13,330,853.

For the calendar year 1936 the total amount expended by the railways of Canada for maintenance of way and structures was \$60,378,274.88 and consequently the interest saving rendered possible by direct subsidies in one form or another would be 22.1 per cent. of the annual expenditure for maintenance of way and structures.

For the period November 1, 1918, to March 31, 1937, the total cost of maintenance and administration for all rural roads and urban streets in Ontario was \$188,317,492.99 (Table 12.8), with an average of \$10,200,000 per annum. On the basis of the railway ratio, motor vehicle users of the Province should, if the treatment were no more favourable than that accorded to the railways in respect of direct subsidies, enjoy an annual virtual subsidy of 22.1 per cent. of the expenditure for maintenance and administration, or \$2,250,000 instead of the \$12,800,000 cited in Art. 8.2. In other words, the motor vehicle users

would appear to be enjoying treatment nearly six times more favourable than that enjoyed by the railways, in so far as the free use of capital invested in the provided physical facilities is concerned.

Unfortunately, a complete comparison of the relative amounts of aid extended to motor vehicles and to the railways cannot be made. Assistance has been granted to the railways of Canada in other, and less definite, forms than by direct subsidy, these concessions constituting, in effect, very large virtual subsidies.

It is a matter of common knowledge that the taxpayers of Canada have in the past twenty years had to meet very heavy obligations on behalf of the Canadian National Railways,⁴ largely due to the change of conditions from those anticipated when these lines were constructed. The amount which the taxpayers of Ontario have contributed in respect of such part of the obligation as has been incurred in Ontario is wholly indeterminable. Whatever this may be, and it doubtless is a very large amount, it is only fair to point out that to a considerable extent this situation has come about through the provision at the public expense of facilities that have made it possible for other forms of transport to supplant the railways in certain important classes of business, as, in like manner, these new facilities may possibly in turn be supplanted by others.

8.4—Subsidies to Water Transport in Ontario. No direct subsidies to water transport are granted in Ontario.

Virtual subsidy to an indeterminable degree exists through the provision and maintenance by the Government of Canada of the waterways, canals and harbours. No lockage fees are charged on the canals of Canada, but linesmen's fees varying from \$15 to \$30 for a one-way passage are charged for passage through the locks of the Welland Ship Canal.

8.5—Subsidies to Air Transport. Up to March 31, 1937, the Dominion Government had spent \$2,084,810.28 on airports in Ontario, all of it being in connection with the Trans-Canada Airways route and almost entirely in the form of unemployment relief.

Information respecting provincial and municipal expenditures on airports in Ontario is available only up to the end of 1931, when it amounted to \$836,129.49.

⁴Canada Year Book, 1938, pp. 651-55.

CHAPTER IX

OPERATING COSTS OF MOTOR TRANSPORT BUSINESSES

SECTION 1—GENERAL

9.1—Operating Costs Necessarily Involved in Rate or Fare Considerations. The instruction of the Order of Reference to inquire into and report on the regulation of commercial motor transport with a view to ensuring, so far as possible, both reasonable service and an absence of unfair competition amongst those engaged in the business and with other forms of transportation, inevitably introduces the question of the actual cost of transporting freight or passengers over the highways.

Very early in the sittings of the Commission it was represented by the trucking industry that the cost of motor transport haulage was in itself so much below the cost of railway operation, at least within some restricted but rapidly expanding zone of operations, that the railways could not economically compete, and that any attempt to do so was flagrantly unfair. On the other hand, it was urged that only by the expedient of working men excessively long hours at low wages, and profiting by what in effect were substantial subsidies from provincial and municipal governments and from the great host of private motorists, could motor transport, except in some highly restricted fields, compete in cost with railway service.

Neither one side nor the other could cite exact costs of doing business in Ontario, or the cost of carrying out any particular transaction. The railways, however, over many years had been subject to public scrutiny, and certain basic costs of railway operation, covering all of Canada, were available from the Canada Year Book, and other governmental publications. No similar material was available regarding motor transport costs.

In view of these circumstances the Commission considered it necessary for its purpose to make some preliminary compilation and analysis of motor trucking costs. The first objective was to determine whether the wage levels found to exist were all that the industry could pay under existing competitive conditions and whether they were wholly within the control of the operators. The second was to shed some light on the question as to how certain operators carried on their operations at a profit while others realized consistent losses; in other words, what cost factors were common to their operations, and what were absent in the one case and present in the other. The third was to be able to point out to the industry, or the section of it that was completely devoid of cost figures, the cost factors present in their operations, and what part of the costs are represented by labour. Lastly, the Commission wished to be able to state with some degree of confidence what, in its opinion, would constitute minimum fair rates under present wage and tax conditions for various transport operations, so that a basis of comparison would exist for the rates actually being charged or recommended within the industry.

9.2—Dearth of Cost Records. In view of the frequent allegations of financial chaos in the business of motor haulage for hire, particular attention was given to characteristic operations of public commercial vehicles. In the

course of the public hearings, or through the study of written submissions, the Commission inquired into the costs of operation of nineteen public commercial vehicle operators. Those selected were representative, some of them being large and well organized, some small personal enterprises, and some of medium status. Information of corroborative value was also received from nine operators of private trucking fleets.

In consequence of a more standardized type of traffic, more comparable cost data were received from motor coach organizations. Certain general relationships based thereupon will be pointed out in what follows.

Much difficulty was experienced in the effort to establish dependable unit trucking costs. It did not arise, however, from any unwillingness of the operators to disclose to the Commission the intimate financial details of their businesses, for there was no hesitancy on the part of any of them in giving all information that they had in confidence. The difficulty came entirely from the general dearth of cost records in the industry itself, and particularly the lack of such on any uniform or comparable basis.

Unfortunately, due to the absence of public regulations prescribing the method of accounting to be used, and the returns or statements to be filed with the Government, the cost records of many of the motor trucking organizations were of little value for the purposes of the Commission. A number of operators, particularly the smaller ones, had no system of book-keeping whatever; others of substantial size had little more than a list of receipts and expenditures and no accounting system or, if they had the rudiments of such, it had not been balanced for several years. Limited liability companies without exception, and the more responsible personal operators, had audited books of account. The classification of accounts, however, varied considerably amongst the firms making submissions and accounts of approximately the same designation were often made up of dissimilar kinds of expense items.

A few operators had rudimentary systems of costs, such as the detailed cost of operating a truck or tractor per day, but in no case had there been any sustained effort made to obtain costs on a ton, mile, or ton-mile basis. Not a single operator who testified before, or made a written submission to, the Commission had any estimate of ton-miles hauled, nor any knowledge of costs on a ton-mile basis nor, indeed, any factual data assembled on which to establish such for any period however limited. Two operators had what appeared to be accurate statements of total mileage run by all classes of vehicles; three more had estimates of mileages based on actual distances run during a limited period; five had accurate records of the tonnage handled per year; a few had estimates of the actual tonnage on the basis of short period surveys. Only six operators coming within the purview of the Commission could supply statistics or estimates of both total tons of freight handled and total miles operated per annum, and in three of these cases either one or other of these factors was estimated from a short period count.

Admittedly, the varied nature of the equipment owned by the different operators and the divergent lengths and characteristics of the routes operated renders any accurate comparison of costs very difficult and uncertain in the absence of detailed statistical data. Consequently, such estimates as have been developed by the Commission respecting ton-mile costs of freight haulage by motor vehicle are necessarily tentative in character.

Strangely enough, what is usually one of the most uncertain elements in business accountancy, with the uncertainty likely to be reflected in magnified form in the balance sheet, namely, depreciation, appears in motor transport

accounting as the most standardized of all the items of cost. With very few exceptions, advantage is taken of the Government income tax allowances for motor vehicle depreciation, that is 25 per cent. of the cost for the first year and 20 per cent. for each of the following three years for each piece of equipment. It is altogether probable that had not the factor of depreciation been brought to the attention of many operators in this emphatic way, the trucking business as a whole would have been much deeper in the financial morass than it now finds itself. In fact, there appears to be a disposition, particularly on the part of small operators lacking their own maintenance facilities, to replace equipment before it has fulfilled its economic life.

For the most part, motor trucking businesses are of mushroom growth, arising out of very small beginnings and founded and developed by essentially practical men, primarily interested in their vehicles and the physical characteristics of their businesses and for a period at least without the full appreciation of the value of, or time or staff to develop, a worth-while cost-keeping system. Such is the common history of all new and expanding businesses, the very success of which is proof of an innate sense on the part of their owners of the cost of their operation, although such enterprises may not be depicted in statistical form or lend themselves to ready explanation. In the case of the trucking business it was observed that this sense of cost was expressed as the cost of operating a certain type of vehicle per day, or over a particular run, or as the revenue required to warrant any such operation.

SECTION 2—MOTOR TRUCK OPERATION

9.3—Factors Producing Cost Variation in Trucking Operations. Determination of the cost of freight haulage involves the careful recording and study of a large number of factors. Traffic may be either of the less-than-truck-load type (L.T.L.) or of the truck-load type (T.L.). In the case of the former, the operation as traced from consignor to consignee commonly involves pick-up, transfer across the platform at a terminal to a line-haul truck, line haul, passing across the platform at another terminal and delivery to the door of the consignee. For truck load operations there may be no passage of the cargo through a terminal, it being picked up at the door of the consignor and delivered at the door of the consignee, with or without assistance on the part of these two parties.

It is a matter of common knowledge that for short-haul operations the pick-up and delivery and terminal costs make up a relatively large proportion of the total charge that must be made to the shipper. Special consideration is given to these in Art. 9.10.

Line-haul costs per 100 lb. per mile vary with the character of the roads, the type and capacity of vehicles employed, the load factor (ratio of average load hauled to capacity load), the number of men assigned to the vehicle or vehicles, speed and certain other features of the operation. The weight of the shipment will to some extent affect the cost per 100 lb. by reason of the influence of total weight on the equipment employed, speed, *etc.* However, it may be said that irrespective of the length of haul, or the weight or composition of the load, the cost of line haul per 100 lb. per mile under conditions of average load obtainable and for conveyance by standard equipment ordinarily employed for the purpose, generally varies remarkably little. The chief variation in the unit cost of any transport operation arises from the varying terminal services supplied.

9.4—California Cost Study. The most authoritative study of the cost of transporting freight by motor vehicle that has come to the attention of the Commission was recently completed by the engineers of the California Railroad Commission after an intensive investigation of three years.¹ While the actual costs cannot be applied to Ontario without adjustment, the ascertained relations of costs for variations in lengths of haul, weight of cargo, truck-load as against less-than-truck-load haulage, and similar factors, furnish convincing demonstration of frequently overlooked but fundamental principles in the economics of transportation.

The influence of the length of haul on less-than-truck-load operations for a 100-lb. package is clearly shown from this study to be relatively unimportant.² Thus, the cost of the whole operation as determined for a haul of 10 miles is \$1.05, while for one of 400 miles it is \$1.53, or both very close to \$1.03 plus $\frac{1}{8}$ cent per mile. Obviously, the cost of handling and overhead expense at the terminals far outweighs the cost of the line haul part of the movement. This is typical of all package business and manifestly is the reason for the levying of a minimum charge for small shipments.

The study shows very clearly that the cost of transportation per 100 lb. decreases as the weight of the shipment increases. For a shipment in the weight group between 10,000 and 18,000 lb. handled in less than truck-loads, that is involving pick-up by a pick-up truck, transfer across a terminal platform, line haul, handling at the other terminal and delivery to the consignee, the cost per 100 lb. for a 10-mile haul is 33 cents, while for one of 400 miles it is 81 cents. These costs, and those for intermediate distances, may be closely expressed for 100 lb. as 31 cents plus $\frac{1}{8}$ cent per mile. The difference between this and the cost of transporting the 100-lb. package above mentioned is striking, but for the same distance it is wholly contained in the terminal charges.

When shipments within the weight group of 10,000 to 18,000 lb. are in truck load lots, where terminal expenses are eliminated, and loading and unloading are done either wholly or in part by the consignor or the consignee, respectively, the cost per 100 lb. for a haul of 10 miles is estimated to be 5.66 cents, while for 400 miles it is 50.48 cents. Stated as a formula, the cost per 100 lb. is approximately 5 cents plus $\frac{1}{9}$ cent per mile.

The studies of the California Railroad Commission confirm the experience of those engaged in motor transport that a great differential in rate is possible as between a "fly-by-night" trucker carrying truckloads only with a single truck and no overhead and a legitimate motor transport company providing common carrier services with attendant high terminal charges.

Similar studies clearly indicate the relatively low cost of full load trucking possible to industrial or other private businesses in which the charge for trucking operations includes only the cost of operating the trucks themselves. These costs frequently form the basis of their demands for rates from public commercial vehicle (P.C.V.) operators.

9.5—Cost of P.C.V. Operations in Ontario. The Commission had before it the audited balance sheets of a considerable number of representative P.C.V. operators and of a number of private operators employing large fleets of trucks. As has been pointed out, there was amongst the P.C.V. operators, no standard form of cost-keeping, if any, nor any comparable systems of unit costs. On the

¹Study of Cost of Transporting Property in Motor Trucks Between Points in California, September 20, 1937.

²*Ibid*, p. 47.

other hand, most of the industrial and mercantile companies submitted financial statements of trucking operations showing accurate records of mileages with their costs reduced to a vehicle-mile basis. In most instances, however, these costs were restricted to the operating costs of the trucks themselves and included nothing for drivers' time, garage accommodation, or other overhead expenditures. Where wages were included, the driver frequently had salesman's duties to perform, thus rendering the wage item not comparable with that for P.C.V. operations.

Competition amongst carriers of goods for hire is keen and very evidently not based on any precise knowledge of costs. In fact, it may be said that in the case of some, at least, of the public commercial vehicle operators, it is carried on in complete ignorance of the costs.

9.6—Operating Costs as a Ratio to Fuel Tax Paid. Various bases of comparison of the operating costs of the P.C.V. operators whose businesses were examined by the Commission were tried, but one after another of them was found impracticable by reason of the lack of comparable data. In the absence of any other common denominator the ratios of the various expenses of operation to the amount of fuel tax paid by each were computed. These ratios may be readily converted into costs in cents per gallon of fuel consumed by merely multiplying them by six. In the case of operators using Diesel equipment to any extent the ratios obtained must be used with that fact clearly in mind.

In some instances the number of gallons of fuel used in a given financial year could not be ascertained with any degree of certainty. Some of the estimates of gasoline consumption that were received appeared so unreasonable that they had to be discarded. Moreover, no two operators segregated their items of expenses into exactly the same groups.

A careful analysis of the operating records of eleven P.C.V. operators in Ontario, reported in Art. A9.1 of Appendix A-IX, shows that the ratio of total cost of operation to fuel tax paid ranges from 13.20 to 25.23, with a weighted average of 19.94. The weighted cost per gallon of fuel was very nearly \$1.20 on an all-gasoline basis, after making empirical adjustments for the relatively small number of Diesel engines employed. Omitting the operator who makes extensive use of Diesel equipment, the weighted average cost of operation of the remaining ten operators was \$1.25 per gallon of fuel.

Of this latter amount, about 53.7 cents represents the cost of wages, salaries and workmen's compensation; 53.6 cents, the operation of vehicles; and 17.7 cents, other expenses of the business.

Discarding the data for the four operators whose costs varied from the average more than fifteen per cent., the average cost per gallon of fuel of the remaining six is \$1.2075.

9.7—Cost-Tonnage-Mileage Relationships. Only six public commercial vehicle operators were able to supply the Commission with statistics of both miles travelled and tons carried. Unfortunately, only two of these were included in the group of six to which reference has been made above, and only four of them in the group of ten. No operator could furnish any information whatever concerning the ton-miles hauled by him.

As is shown in Table A9.4 of Appendix A-IX, the average costs of operation of this group were also \$1.25 per gallon of fuel consumed, the average expenses and receipts per ton of freight handled were \$4.15 and \$4.88, respectively; the

expense per mile operated was 17.95 cents; the miles operated per gallon of fuel used, including pick-up and delivery, were 6.954; the tonnage transported per gallon of fuel was 0.30 ton; and the vehicle-miles operated per ton of freight handled were 23.15 miles.

Studies of a representative selection of waybills of fifteen operators made by the Commission indicated an approximate average haul per ton of 101.7 miles.

On the basis of this estimate and the reported average cost of \$4.15 per ton of freight handled by the six representative operators who had the necessary data, the cost of carrying on a P.C.V. Class "A" and Special "C" business would appear to be about 4.08 cents per ton-mile. There is consequently a wide disparity between the cost per truck ton-mile in this service and the average cost per ton-mile in railway operation, which is reputedly about one cent.

Using the average reported distance of 23.15 miles operated per ton of freight handled, which includes pick-up and delivery mileage, and the estimated length of haul of 101.7 miles, as approximately the total haul, the average load for the six representative operators would be 4.39 tons. Study of the results of official traffic checks and approximations made with respect to other operators on the basis of fuel consumed indicates that the general average mileage per ton of freight would be nearer 30 miles. The average load hauled per power unit would consequently be less than 4 tons.

9.8—Co-ordination of Pick-Up and Delivery With Line Haul. An outstanding merit of truck transportation is its flexibility, involving the readiness to call at the shipper's door for goods and to deliver them at the consignee's door. But as transport trucks increase in size, their earning power increases at a more rapid rate than the total expenses of operation, so that there is an economical urge to use larger and larger trucks. The earning ability of the larger trucks depends, however, upon their steady employment in hauling maximum loads. Their minute-to-minute costs are too great to permit them to waste time in pick-up or delivery of a large number of small parcels.

Experience shows that this service of assembly and distribution can best be performed by lighter vehicles, cheaper in first cost and less expensive to operate. Much evidence was given that the usual day's run for a highway transport truck was from 200 to 275 miles, as against an estimated mileage of perhaps one-fifth as much for a pick-up and delivery truck,³ but little factual information was available.

9.9—Line-Haul Costs. Certain general principles respecting line-haul costs have been discussed in Art. 9.4. Substantiation of these was afforded by many actual instances brought to the attention of the Commission.

With one exception, no P.C.V. operator coming within the purview of the Commission had any clear segregation of the costs of operating highway trucks per mile, independent of any costs of loading or unloading or other terminal operations.

Several private firms, however, submitted detailed data bearing on the matter.

A very substantial amount of general information and specific fact was brought out in cross examination, which had a substantiatory value, when used with discrimination. The details of some of this will be found in Appendix A-IX.

³Evidence, p. 4381.

Line-haul costs per ton of freight transported will necessarily vary with the size and mechanical state of the equipment used, the load factor, condition of the road, length of run, number of drivers used, wages paid, speed maintained, the extent to which the equipment can be continuously employed, and certain other circumstances. While costs of specific movements may vary widely, and theoretical estimates more widely still, yet in the ordinary operation of many trucks over a considerable period an average minimum cost will ultimately appear—a cost that is attainable by the majority of operators.

From a consideration of all the data available to it, the Commission is satisfied that two cents per ton-mile, or one-tenth cent per hundred pounds per mile closely approximates, under the conditions as at present existing, the minimum average working cost of line haul, inclusive of its appropriate overhead, but exclusive of costs of loading or unloading, pick-up and delivery and associated expenses.

9.10—Cost of Loading and Unloading Highway Trucks. The cost of loading and unloading highway trucks is the same per hundred pounds, irrespective of distance hauled or whether the shipment is a full truckload shipment, or a less than truckload shipment. The cost approximates 50 cents per ton for both operations, or $1\frac{1}{4}$ cents per hundred pounds for loading and the same for unloading. Details as to the source of this cost are given in Appendix A-IX.

Loading and unloading is a straight labour cost, and will tend to be lower in the smaller communities.

In addition to the labour cost, a relatively fixed amount per 100 lb. must be added to cover office and billing costs, and related overhead expenses applicable to the line-haul movement. An amount of 0.75 cent at each terminal is allowed for this charge, or altogether 1.50 cents per 100 lb.

9.11—Cost of Pick-Up and Delivery. The cost of pick-up and delivery is a most substantial item in the cost of operation of a common carrier transport business.

This cost must bear some relation to the size of shipments, the weight of individual pieces, the density of pick-up, that is the extent of the area within which a full pick-up load can be obtained on any one trip, the distance that the area in question is from the highway truck loading platform, the size of the pick-up truck, and the frequency with which pick-up rounds must be made to meet customer conditions.

The cost of warehouse, platform and loading services will be influenced by the size of the parcels, and the number of destinations to which goods brought to the platform are consigned, with consequent need of segregation and accumulation for shorter or longer periods of warehousing.

Terminal services and delivery at the point of destination will, to all intents and purposes, cost the same as the corresponding pick-up and terminal services at the same point on a reverse movement. Such costs will differ from town to town, depending, amongst other factors, upon the size of the area over which the service is provided.

It can readily be seen that the cost of pick-up and delivery is entirely absent in all truckload operations, when the movement is direct from the shipper's premises to the consignee's premises. Equivalent operations begin when the empty common carrier truck draws up at the terminal loading platform, and when the empty full-load truck draws up at the shipper's door, and when they terminate in a corresponding manner. Less-than-truckload and truck-

load rates between the same points should differ by almost a fixed differential if it were not that cost of pick-up, warehousing and delivery may depend in any particular case on the product and on the facilities for handling it.

The segregation of the cost of pick-up and delivery has been attended by considerable difficulty, and the results are at best tentative. The cost of pick-up or delivery in Toronto, including its attendant overhead charges, averages scarcely less than $9\frac{1}{2}$ cents per hundred pounds, but it might be as low as 4 or $4\frac{1}{2}$ cents in a small town. Details are given in Appendix A-IX.

9.12—Minimum Cost of Freight Motor Transport. In view of the above findings and of other considerations set out in Appendix A-IX, the Commission is led to express its conviction that, in the case of Class "A" operations, any freight motor transport rate that is less than one-tenth of a cent per hundred pounds per mile, plus 4 cents per hundred pounds in the case of truckload operations, and plus an additional 9 to 15 cents per hundred pounds, in the case of less-than-truckload operations, depending upon the size of the pick-up and delivery areas at the points of origin and destination of the shipment, represents in itself unremunerative operation, if not unfair competition.

9.13—Depreciation of Trucks and Trailers. As has been pointed out in Art. 9.2, the practice with respect to allowances for depreciation has been largely standardized through adherence to the regulations respecting Dominion income tax returns.

In Art. A9.10, of Appendix A-IX, it is shown that the average annual write-off for the vehicles of fifteen P.C.V. operators is about 14.5%. That is to say, the average age of all equipment in service is almost exactly seven years. The evidence was emphatic that this equipment was in first class operating condition. For buildings, furniture, and other equipment than vehicles, the accrued depreciation is slightly over 17%. The amount of fixed or other physical property other than vehicles is relatively of a very minor amount.

9.14—Equipment and Employees in P.C.V. Operations. The details respecting the amount of equipment and number of employees of typical P.C.V. operators are presented in Art. A9.11, of Appendix A-IX. The average yearly receipts of a class "A" operator per truck or tractor owned is \$5,286, to obtain which he employs 1.95 persons, of whom 1.12 are drivers and 0.83 in other categories.

SECTION 3—MOTOR BUS OPERATION

9.15—Costs Per Bus-Mile, Seat-Mile and Per Passenger Carried. Unfortunately, no information is available from motor bus operators concerning the cost of bus transportation per passenger-mile. Statements filed with the Commission indicate, however, the costs of doing business on the basis of other, though less satisfactory, units. For the six largest motor bus operators in Ontario, the costs of ordinary operation, plus taxes, licence fees, rents, interest, depreciation and applicable overhead, for the year ending December 31, 1936, the last full year for which the returns were available, were:

Per bus-mile	25.76 cents
Per seat-mile	1.17 cents
Per passenger carried	31.47 cents

Some idea of the variation in costs of motor bus operation may be gained from a comparison of the operating statement of Gray Coach Lines, Ltd., which

undertakes to operate at cost,⁴ with that for the six largest operators, including Gray Coach Lines. From this it appears that the other five companies have a net operating expense per bus-mile, other than taxes, rents and reserves of 94 per cent., and a total cost of operation and fixed charges of 84 per cent., of that of Gray Coach Lines.

It thus appears that the total cost per bus-mile given above for the six companies may, for certain operators, be increased in the ratio of 100/84, or by 19 per cent. The costs per seat-mile and per passenger carried would also be increased, but not in the same ratio.

As all competition between public vehicle services has been suppressed and the operators are hence free within reason to set fares at such critical levels as will yield maximum return under existing conditions of competition from private motor cars and railways, it is to be presumed that such revenues are being attained, in which case the foregoing comparison with Gray Coach Lines' operations is significant.

⁴Brief, p. 8.

CHAPTER X

RATES AND FARES

SECTION 1—GENERAL

10.1—Aspects of the Rate Situation Requiring Consideration. Under the Order of Reference the Commission was required to make a comparison of the magnitude of the tolls and rates charged by the owners of commercial motor vehicles with those charged by other modes of transportation and to consider the method of fixing and determining the rates charged by the operators of for-hire motor vehicles. In addition, it was enjoined to investigate and report on regulations calculated to prevent commercial motor vehicle operators from unfairly competing with one another, or with other forms of passenger and freight transportation. For this reason, a brief consideration of the general basis of rate-making appears to be necessary.

10.2—Generally Applicable Principles of Rate-Making. To facilitate a comparison of rates the factors that govern or influence the tolls and rates charged generally by transport agencies require to be outlined. At the outset, the conflicting interests of shippers and consignees on the one hand, and the transport agency on the other, at once intrude and it is not always easy to reconcile them.

The actual cost of transport depends very little on the value of the goods handled, but very much upon their bulk in relation to weight, upon their character, upon whether they are fragile or perishable, or otherwise, and, of course, upon the distance of transport.

But the shipper's willingness or ability to pay transport charges is essentially in proportion to the value of the goods transported. If each individual shipment had to pay its exact cost of transport, a large part of the vital necessities of our civilization could not move at all, or only for very limited distances. The basis of freight rates is thus primarily experimental and empirical. The problem is to determine (using true, but malodorous, words) "what the traffic will bear," for the transport of any particular class of goods between specific points.

A succinct appraisal of the problem was made by Mr. J. A. Argo, Chief of the Tariff Bureau of the Freight Traffic Department, Canadian National Railways, who stated in evidence before the Commission that "the only science of rate-making that actually exists in the making of railway freight rates is that which will move commerce from one place to another at a charge which will (in relationship to the total traffic moving) pay the company its operating expenses, and make a reasonable return on the investment."¹

If no public control over freight rates existed, and there were no chance of such, the selfish interests of the carriers themselves, would soon lead to the varying of rates for no other reason than to obtain, in its worst implication, "all that the traffic will bear," in the face of existing competition, and only limited by the operation of the law of diminishing returns. In the absence of

¹Evidence, p. 201.

any public regulation, it is also more than likely that goods demanding special facilities or extra care in handling, and moving in unprofitable quantities, would be refused carriage. The operation of one or both of these policies can only result in the intervention of the public authority on behalf of the shipper and consignee. Conditions of this kind occasioned the setting up of the Board of Railway (now Transport) Commissioners for Canada, in 1904.

It is apparent from a little consideration that the public economy demands:

- (1) Rates that are available to all shippers alike.
- (2) Rates that are not discriminatory against any class or type of goods.
- (3) Rates that will permit as wide a radius of doing business as possible, and hence non-discriminatory as to localities.
- (4) Rates that yield to the carrier a fair return not excessively out of line with his costs of rendering service.

To provide the necessary basis for any comparison of rates charged by the various transport agencies, the broad outlines of the railway rate structure, its development through the years and the control exercised upon it by the public authority, were placed before the Commission at some length in evidence. It became increasingly plain as the sittings of the Commission proceeded that both marine rates and motor transport rates were derived directly from railway rates. For this reason, some consideration of railway rate-making was obviously necessary.

SECTION 2—RAILWAY FREIGHT RATES: THEIR ORIGIN, DEVELOPMENT AND PRESENT BASIS

10.3—Principles of Railway Rate-Making. Railway freight rates, as they exist today, are the product of experience and of trial and adjustment with a modicum of compulsion by the public authority. They are never static. Every influence that affects commerce bears on the freight rate structure, and of these the introduction of the motor truck has been one of the most far-reaching.

Many principles must be observed in the framing of rates. Of paramount importance is the fact that under the Dominion Railway Act, and under the Ontario Railway Act as well, the railways must accept all traffic offered for shipment and, in general, must carry it at rates not exceeding those listed in published tariffs approved by the Board of Transport Commissioners, without discrimination amongst shippers. Moreover, there must be no discrimination, as far as normal rates are concerned, between commodities or between localities. The railways are not permitted to publish a higher normal rate for a short haul than for a longer one of which the shorter haul forms a part.

The normal approved rates mentioned above are class rates; that is to say, all commodities that move are classified into one or other of ten main classes. Various factors determine this classification, such as the relation of bulk to weight, the need of care in handling, the ease, or otherwise, of handling or stowing, the intrinsic value of the goods, the way they are packaged or otherwise prepared for shipment, *etc.*

Particular attention needs to be given to insuring that low class commodities may move. Since a certain earning per ton-mile is necessary and low grade commodities cannot carry the average rate, it is necessary that other and higher grade commodities pay more.²

Generally speaking, normal class rates approved by the Board of Trans-

²Evidence, p. 430.

port Commissioners are based on mileage. Distance is also a factor to be considered in the establishment of commodity rates, particularly in cases where competition is absent.

It is possible for the railway carriers, when offered a commodity in large volume, to establish a rate per 100 lb. lower than the rate that would be offered for the same commodity in smaller quantities. In other words, the higher the required minimum weight of a shipment is, the greater the assured earnings per car for the carrier.

Manifestly, the demands upon space of light, bulky commodities are greater than those of heavy compact shipments and the charge levied on the former per 100 lb., if the railways are to secure reasonable per car earnings, must be higher than for the latter.

In order to avoid charges of unjust discrimination as to localities, the commodity rates to any destination quoted for any point of shipment must bear the same relationship to the class rates offered as would obtain for any other shipping point to the same destination.

Where railways having different lengths of line between two common or competitive points establish a commodity rate, it is based upon that fixed by the railway having the shorter line.

In many cases lake-and-rail and also all-rail rates are built up on recognized arbitraries over the rates established between the same points by the water carriers. In cases where agreed differentials do not exist, the actual water rate plus the amount which might have to be paid for other transportation services is used in arriving at the rate.

When traffic offered to the railways obviously demands the establishment of a low rate, they must give consideration to the earnings per ton and per car-mile that would be produced by such a rate in comparison with average per ton and per car-mile earnings.

Competitive rates established by the railways to meet motor truck haulage do not rest on any specific or scientific basis. They are made usually after business has been lost to highway transport, although in some instances they arise from the necessity of meeting quotations made by truck operators that have come to the attention of the railway management. It is therefore obvious that rates established by the railways to meet highway competition are simply the rates that the former find it necessary to publish if they are to regain or retain traffic.

In making carload truck competitive rates the railways endeavour, wherever possible, to secure a higher minimum weight per car than is applicable in connection with the existing rail rate in order to maintain their revenues per car.

10.4—Development of the Freight Rate Structure. The developments leading up to the present freight rate situation in Ontario were very clearly outlined in evidence by Mr. J. A. Argo, for the Canadian National Railways. Mr. William Hayward, for the Canadian Pacific Railway, stated that the rate situation of the latter in the Province of Ontario was identical with that of the Canadian National Railways.³ The essentials of Mr. Argo's memorandum are outlined in what follows.

The maximum rates which may be charged in the Province of Ontario, for

³Evidence, p. 533.

Capreol, Sudbury and south and east thereof, are published on a mileage basis as class rates (classes 1 to 10 inclusive) governed by the Canadian Freight Classification. These maximum standard mileage class rates are the only freight rates that must be approved by the Board of Transport Commissioners for Canada, and published in the Canada Gazette before taking effect.

To provide a somewhat lower basis of class rates than those published in the maximum standard mileage class rate tariffs, specific (that is, station to station) class rates are published between the principal distributing centres and other stations in Ontario, most of which are on the basis of what is commonly referred to as Schedule "A", or town tariff rates, which form the basis of the present normal rates. For distances up to thirty-nine miles, Schedule "A" rates are the same as the maximum standard mileage rates. Beyond that distance Schedule "A" rates are gradually, but increasingly lower than the maximum rates.

Class rates are in many instances too high to permit commodities to move, thus necessitating the publication of what are commonly referred to as "commodity tariffs," in which rates are provided, usually for shipment in carload lots, on a lower basis than class rates. Many such tariffs are published, applicable to building materials, sand and gravel, asphalt, cement, coal and coke, forest products, grain and grain products, iron and steel commodities, livestock, petroleum and petroleum products, paper and paper commodities, pulpwood and many other miscellaneous commodities.

To meet motor truck competition, which by 1933 had commenced to assume serious proportions in Ontario, the Canadian National Railways published, effective March 6th of that year, a tariff of rates, applicable to L.C.L. haulage, for all commodities irrespective of class (other than bulk freight, acids and explosives, livestock, live poultry, or packages too large to be loaded into a standard box car), in which the published rates included the cost of pick-up and delivery at fifty-two stations. The only packing requirement was that shipments must be in such condition and so prepared for shipment as to render the transportation thereof reasonably safe and practicable. The minimum charge was that applicable to one hundred pounds, but not less than fifty cents.

Effective August 1st of the same year, this tariff was extended to cover additional territory and the number of stations at which free pick-up and/or delivery service was provided was from time to time increased until on the date the tariff was cancelled (June 12th, 1937) the service was performed at a total of one hundred and nine Canadian National Railways stations.

The basis of these all-commodity rates was a mileage scale, with a rate of thirty cents for distances not over forty miles, and graduated until a rate of eighty-two cents per hundred pounds was reached at a distance of four hundred and fifty miles.

Effective June 1st, 1935, a reduced basis for shipments weighing one thousand pounds or more was put in force, starting with a five-cent reduction when the rate was thirty cents, and rising to a ten-cent reduction when the rate was forty cents or more.

These all-commodity, pick-up and delivery rates were in force until June 12th, 1937, when the present four-group pick-up and delivery rates became effective.

Effective May 1st, 1935, another experimental four-group competitive tariff was published by the Canadian National Railways in the territory Toronto and East. Rates in this tariff for groups 1 to 4 closely followed the town tariff

rates for classes 1 to 4, but in addition pick-up and/or delivery services were provided free at a large number of stations.

It was found that the four-group system had advantages over the all-commodity system. Additional commodities could be added from time to time and assigned to the group which would best meet the competitive situation. Commodities already in the tariff could be reclassified to meet changing conditions as they were, from time to time, found to exist.

Accordingly, the above-mentioned competitive tariffs were withdrawn and a new four-group tariff published, effective June 14th, 1937. The rates for groups 1 to 4 are basically the town tariff rates for classes 1 to 4. Free pick-up and delivery services at 135 stations is provided, but the rates for longer distances, for which truck competition is not so keen, have been augmented to cover partially the cost of cartage.

The whole cost of pick-up and delivery service is absorbed by the railway on shipments moving not in excess of 480 miles. Beyond that distance the rate charged includes an increasing allowance to offset the pick-up and delivery charges, but not the full cost until the movement has a length of 750 miles or thereabouts.

As railway pick-up and delivery rates are the rates with which motor transport must compete, typical examples are given in Table 10.1. The motor truck tariff developed and recommended by the Automotive Transport Association of Ontario, and to a limited degree in use among its members, has been based on these tariffs.

In addition to the regular pick-up and delivery rate, a large number of competitive commodity rates, applicable on shipments in carload quantities and, in addition, any-quantity rates, are in effect on the railways. These rates vary from time to time to meet constantly changing competitive conditions, whether by motor truck or water, or both.

It is not practicable to give the basis for these carload and any-quantity competitive rates. Published to meet competition, they necessarily must be influenced by the rate of the competing carrier, and must change as conditions change.⁴

It should be noted that prior to the inauguration of the pick-up and delivery service by the railways, the existence of minimum cartage charges at either terminal materially increased the total rate on minimum shipments. The minimum cartage charge at Toronto is thirty cents for three hundred pounds or under, and forty cents for shipments over three hundred pounds, the rate being six cents per hundred pounds.

According to Mr. R. P. C. McLeod, of the Temiskaming and Northern Ontario Railway, there is no intensive truck competition in the territory served by that railway, as the centres of population are small and the distances great. Truckers from Southern Ontario would have difficulty in getting return loads⁵ and moreover, as transport operators disclosed, public commercial vehicles with home terminals in the southern part of the Province are not allowed to extend their operations north of North Bay.

The class rates applying locally on the Temiskaming and Northern Ontario Railway are on the town tariff basis, with the usual normal commodity tariffs. While pick-up and delivery tariffs apply in joint rates with the Canadian

⁴Evidence, p. 240.

⁵Evidence, p. 544.

National Railways and the Canadian Pacific Railway, there are no pick-up and delivery services provided in Temiskaming and Northern Ontario territory.⁶

**Table 10.1—Typical Pick-Up and Delivery Rates in Cents
per Hundred Pounds, Canadian National Railways,
Effective June 14th, 1937.**

Toronto to:	Group 1	Group 2	Group 3	Group 4
Hamilton, Oshawa	36	32	27	24
Guelph	40	34	30	25
Brantford, Kitchener, Orangeville	43	37	32	27
St. Catharines, Barrie, Cobourg	47	41	36	29
Niagara Falls	50	45	37	32
Stratford, Orillia	54	47	41	34
London, Belleville	58	50	43	36
Goderich, Owen Sound, Huntsville	61	54	47	37
Kingston	65	58	49	41
Chatham, Windsor	68	59	52	43
Brockville, North Bay	72	63	54	45
Ottawa	75	66	58	47
Cornwall	79	70	59	50
Montreal (1)	70(a)	70(a)	63	52
(2)	60(a)	60(a)	60(a)	52

(1) Less than 5,000 pounds.
 (2) 5,000 pounds and over.
 (a) Concurrent all-commodity rates.

There is in effect on this line, however, a stop-off arrangement for partial unloading, by which a shipper in the southerly part of the Province can send a car to be partially unloaded at various points along the line and thus serve various consignees along the way. The shipper pays on a carload basis, plus an extra charge of one cent per one hundred pounds for merchandise taken off at each stop-off point, with a minimum of \$3.00 for each of such points. This arrangement was in effect long before trucks were in use, and may, to some extent, have been instrumental in preventing the development of truck competition.⁷

10.5—Basis of Railway Rates to Meet Truck Competition. The rates established by the railways to meet truck competition do not rest on any scientific basis. It was admitted by Mr. Argo that when a rate is published for such purposes the only principle involved is the successful meeting of the competition; that is, the rate that is published is made such as to meet the competition regardless of anything else.⁸

In cases where it is obvious that a rate to secure the haulage is manifestly a ridiculous one, the railways agree that they must forego the business. According to Mr. Argo, it is not their policy to make rates that are clearly below cost.⁹

In establishing carload rates to meet truck competition, the railways endeavour to secure a higher minimum carload than would be applicable to normal rates in order to maintain as far as possible the revenue considered necessary per car operated.

⁶Evidence, p. 555.

⁷Evidence, p. 546.

⁸Evidence, pp. 377, 378.

⁹Evidence, p. 506.

10.6—Relation of Railway Freight Rates to Cost. Despite much questioning, those who appeared for the railways were unable to furnish any indication of the cost of moving a particular commodity over a given distance. They freely admitted that, so far, no method of accounting had been devised for the segregation of the cost of hauling a given commodity or shipment as a part of a trainload or carload. Mr. Argo stated in evidence that the actual cost of transporting any particular item in a carload or trainload of mixed goods is, for all particular purposes, indeterminable and is, moreover, not a direct factor in the setting of any individual rate.¹⁰

The difficulty of assigning proportionate amounts for overhead to the movement of any particular commodity or shipment is obvious, as is evident from the remark of Mr. Argo, "you cannot tell how much of our President's time is devoted to the carrying of a box of canned pears from Simcoe to Toronto."¹¹

According to the evidence, the only way in which the cost of operation can be utilized in the fixing of a rate is by considering the cost of operating the railway system as a whole. The specific cost applicable to the movement of a part of a trainload or carload does not enter into the fixing of any particular freight rate on an article, except in so far as the railway has in mind the general financial picture for the year. It is a question of establishing rates to cover the total costs of operation of the system, plus something in addition as a return on the investment.¹²

SECTION 3—RAILWAY EXPRESS RATES: THEIR ORIGIN, DEVELOPMENT AND PRESENT BASIS

10.7—General Basis of Express Rates. Tariffs of express tolls are based on the block system and are governed by an Express Classification. As pointed out in the memorandum submitted by Mr. C. Norman Ham, Traffic Manager, Canadian Pacific Express Co., certain articles, such as millinery, vehicles, boats, *etc.*, which by reason of their bulk, fragility or value require more than ordinary care or entail more than ordinary risk, take ratings higher than first class. General merchandise is rated first class, while second class rating is restricted largely to perishable, marketable, edible products of the farm and fisheries. No changes may be made in the classification ratings unless and until they have first been submitted to the Board of Transport Commissioners for affirmative approval.

The express companies accept all articles tendered them, other than bulk freight, and certain articles such as explosives, which are prohibited from being carried in passenger trains.

Normal express rates were prescribed by the Board of Railway Commissioners for Canada on July 25th, 1919,¹³ and again in February, 1921, when first class rates were increased by 35 per cent. and second class rates by 25 per cent. Normal second class rates are now between 69 per cent. and 70 per cent. of first class rates. The latter, in cents per hundred pounds, are given in Table 10.2.

It is a matter of interest to record the basis on which the Board of Railway

¹⁰Evidence, pp. 259, 354, 507.

¹¹Evidence, p. 352.

¹²Evidence, pp. 353, 355.

¹³Evidence, p. 6644.

Commissioners prescribed express rates in 1919. Three factors were considered, namely, transportation, physical handling, and clerical services.¹⁴

The transportation charge was figured as one and a half times the standard first class freight rate, averaged over fifty-mile blocks, and was determined, for Eastern Canada, as twenty cents per hundred pounds per fifty miles. For physical handling, such as pick-up and delivery, loading and unloading, thirty cents per 100 lb. was allowed. For clerical work, office staff, auditors, office, *etc.*, thirty cents per shipment was allowed, as that factor did not vary with the weight of the shipment. This gave an initial rate of eighty cents per hundred pounds for the first fifty miles, with twenty cents additional for each fifty additional miles. The total charge was so fixed that if applied to the total traffic it would produce revenue more than sufficient to meet operating expenses.

Table 10.2—Normal First Class Express Rates

Miles	Ontario South and East of Sault Ste. Marie, Sudbury and North Bay, Cents per 100 lb.	Ontario North and West of Sault Ste. Marie, Sudbury and North Bay, Cents per 100 lb.
50	110	115
100	135	150
150	160	180
200	190	215
250	215	250
300	245	285
350	270	315
400	295	350
450	325	385
500	350	420
Approximately:	80 cents plus 27½ cents per 50 miles	80 cents plus 33 1/3 cents per 50 miles

In addition to normal first and second class rates, there are commodity rates in force, usually applicable to articles rating second class and of relatively low value, where despatch is essential, though other factors may be competition of markets, or the competition of other carriers.

Normal commodity tariffs include low rates on fruit and vegetables from the Niagara and Leamington districts, as well as blueberries from Northern Ontario, and fish from Lake Superior, and various other points in Ontario, all of which have been in effect for many years. These are on a lower basis than second class rates. There are also special rates on cream on a mileage basis much lower than normal second class. A "special package" tariff is also in effect, covering rates on parcels up to twenty-five pounds, which is on a provincial basis, and issued to meet the competition of the post office.

10.8—Meeting of Truck Competition. Aside from these normal commodity tariffs, there are also competitive rates to meet truck competition, applicable to all types of merchandise and produce.

In the territory of Southwestern Ontario, lying South and West of the Toronto-Orillia line, there has been in effect since October 7, 1935, a special

¹⁴Evidence, p. 6674.

tariff, intended to meet motor truck competition, of 50 per cent. of the normal express rates which would ordinarily apply in that territory.

Various express rates, some of which are lower than rail rates, were put in before railway pick-up and delivery rates were instituted, and were published with the consent of the railway freight departments in an effort to hold traffic to the rails. The hope was expressed by Mr. Ham that they would ultimately disappear when truck rates are stabilized.¹⁵

The express companies also maintain numerous competitive commodity rates which vary from time to time in accordance with the constantly changing competitive conditions. In his evidence, Mr. Ham¹⁶ observed that such competitive rates are not compiled on any set basis and must necessarily be influenced to a large extent by the level of the rates of the competing carrier that they are designed to meet. Competitive express rates are either the same as, or somewhat higher than, the known truck rates and in no instance are they established on a lower basis.

Mr. Ham further observed that it is very difficult to meet truck competition in the present chaotic state of truck rates. By reason of lack of order in the situation, the express companies do not know exactly what they have to meet and consequently it is very difficult to do so in an orderly fashion. Different methods have to be applied in different parts of the country and the situation is met to the best of the ability of the express companies.¹⁷

10.9—Relation of Express Rates to Cost. With respect to the repeated charges on behalf of motor transport operators that the express companies were carrying goods below cost, it was contended¹⁸ on behalf of the latter that it was preferable to reduce the rate and get some additional revenue rather than to let the business go and keep expenses constant; that the loss from motor truck competition was essentially short-distance business; that the express companies had in any case to maintain their services for business beyond the zone of competition; and that the inauguration of reduced competitive rates had not decreased net revenues. Mr. Ham summarized the situation thus: "If through competitive conditions some one comes in and takes away all that traffic moving within this (50-mile) zone, our expenses are still there. It certainly pays us to reduce that rate and still get some revenue rather than let the revenue all go and keep our expenses constant."

Additional light on the attitude of the express companies to the relation of rates to costs was shed by Mr. Ham in further evidence¹⁹ as follows: "There is no system of express accounting which makes it possible to ascertain the cost of transporting any particular shipment by express from one place to another, this being due largely to the fact that a high proportion of the expenses incurred for express service is for express service as a whole and not for any particular portion of the service."

"All expenses are not on all fours. Some expenses are constant, regardless of the volume of express traffic handled, while other expenses may vary with variations in the amount of business handled, though not to the same extent, nor in exact proportion to the variation in the density of traffic."

"In adjusting special express rates, the main consideration is to set a rate

¹⁵Evidence, p. 7027.

¹⁶Evidence, p. 6667.

¹⁷Evidence, p. 6670.

¹⁸Evidence, pp. 6690, 6704.

¹⁹Evidence, p. 6954.

that will cover the variable costs or the additional out-of-pocket expenses, incidental to the carriage of the particular traffic subject to that rate, and also provide as large an amount as possible toward the payment of the constant expenses."

"As we could not hope to secure the traffic (Toronto to Niagara Falls) at the normal express rate, in the face of the much lower rate in effect by truck, we accepted the business at a rate which covered the entire cost of handling it with a trifle over."

"Reduced competitive rates are not considered ideal rates by the express companies by any means, but their adoption has been practically forced upon them through the stress of truck competition. When the truck rates are stabilized, undoubtedly express rates will be readjusted to meet the situation as it will then exist."

An outstanding example of rate reduction on this theory of added load was given in evidence regarding the movement of silk between Drummondville and Montreal. Silk is a high grade product that can stand a relatively high rate. The normal express rate from Drummondville to Montreal was \$1.35. On June 1st, 1931, the express company, in face of truck quotations, established a rate of \$1.00 and retained the traffic till 1933, when trucking companies made a determined effort to secure it. The shippers suggested an 85-cent rate and, on accepting this suggestion, the express company held the traffic for some time, only to be lost to the freight department of another railway.²⁰

SECTION 4—STEAMSHIP FREIGHT RATES

10.10—General Basis of Water Carrier Rates. A generation ago an arrangement was adopted by the rail and water lines whereby a freight differential in favour of the steamships was adopted, thus automatically fixing the steamship rate, once the railway rate is fixed. It was based on the fact that the steamships give a service that is slower and that necessitates more handling. The differentials were originally 10, 8, 7, 6 and 5 cents per hundred pounds for first to fifth class, respectively, but eight or ten years ago, it was agreed to shrink them to 8, 7, 6, 5 and 3 cents for first to fifth classes, and 2½, 2, 2, 2 and 2 cents for sixth to tenth classes. Such differentials apply to both class and commodity rate traffic. In the latter case the differential used is the differential of that class the rate for which most nearly approximates the commodity rate.

Except to the extent that rates under the prior basis of differentials did not yield a satisfactory revenue, and rates were accordingly raised, there is no relation of any individual rate to the cost of the specific service rendered for that rate.

10.11—Examples of Steamship Rate Practices. Competition from water carriers during the period of navigation is a seasonal influence on the general freight rate situation in Ontario of considerable importance. Its direct effect on motor transport is probably not great, but inasmuch as it seriously affects railway revenues it cannot fail to produce repercussions in the fortunes of the motor transport operators.

While the available time did not permit the taking of oral evidence from representatives of water transport, Canada Steamship Lines, Ltd., submitted

²⁰Evidence, p. 6923.

to the Commission complete details of its tariff of rates and related matters. Package freight business by water in Ontario is largely controlled by this company, which operates regular services from Montreal to the head of the lakes, making a regular itinerary of the ports.

Arrangements respecting bulk cargoes are made on the basis of individual agreement, such virtually amounting to ship chartering. For passenger and package freight business, the filing of tariffs with the Board of Transport Commissioners for Canada has so far not been necessary, but will become so on proclamation of the applicable part of The Transport Act, 1938²¹. In the matter of passenger service touching United States ports, American tariffs must be filed with, and approved by, the United States authority.

The company voluntarily subscribes to the Canadian Freight Association Classification No. 19C. It publishes freight tariffs and distributes them for convenience, but in the case of transport of goods in bulk there is no provision presently made for enforcement by the Board of Transport Commissioners. These tariffs govern the charges made at the present time, except as modified by special rate notices to the company's agents. These may refer to either class or commodity rates available to the general public, or special rates granted to particular customers for special products and quantities.

As part of their normal service, Canada Steamship Lines provide free pick-up and delivery of freight in Toronto and Hamilton. To firms with their own railway sidings, the steamship company in every case absorbs the cost of cartage to the dock. In addition, the cost of this cartage movement is absorbed in the case of canned goods. Peterborough to Toronto is the longest truck haul under this arrangement, which was probably started by the larger canning factories, but is now the regular practice.

In connection with the Canadian National Electric Railways, in the Niagara Peninsula, a boat service is run between Port Dalhousie and Toronto.

Included in the pick-up and delivery service of the Canadian National Railways is an all-commodity summer rail-and-water rate of 25 cents per 100 pounds between Toronto and St. Catharines.²² This rate includes pick-up or delivery in Toronto and St. Catharines, loading on steamer and car, and transfer at Port Dalhousie, in addition to the transportation *via* steamer and railway.

The rate mentioned is manifestly a competitive rate without real relation to the costs involved²³. Presuming that once the schedule is announced the boats have to run anyway, any revenue, however small, is all to the good. While unable to give any costs relative to this movement, the apology offered by the witness for the railway company was simply, "That is the position the trucks have placed us in."²⁴

10.12—Comparison of Steamship and Land Carrier Rates. It is difficult to make any exact comparison between rates charged by the steamships and the land carriers, especially motor transport. The greater part of the steamship business is that of lower class freight in substantial shipments, with the time of delivery of secondary importance. It is consequently a business of opposite character to that of the motor transport common carriers.

For what it is worth, a spot check of a substantial number of various special rates that would apply on 1,000-pound quantities between various points

²¹S.C. 1938, c. 53.

²²Evidence, p. 509.

²³Evidence, p. 530.

²⁴Evidence, p. 513.

in the territory from the Detroit river to Montreal, compared with railway pick-up and delivery rates between the same points, showed an average ratio of 0.68. The individual ratios range from 0.465 to 0.940. The most that can be drawn from this approximation is to confirm the usual presumption, that certain classes of freight are carried by water at figures substantially less than the rail rates would be for the same shipments.

SECTION 5—MOTOR TRANSPORT RATES: RECOMMENDATIONS OF THE AUTOMOTIVE TRANSPORT ASSOCIATION

10.13—Nature of the Association. Organized in 1926 and incorporated under the Ontario Companies Act, in 1928, the Automotive Transport Association of Ontario was formed to further the interests of the automotive transport industry in the Province. It is a voluntary organization with a membership, at the time of the public hearings of the Commission, of 330 carriers operating approximately 3,000 vehicles, of which 2,245 were licensed under the Commercial Vehicle Act. Of its member companies, 105 are Class "A" operators, operating 1,635 licensed vehicles, or 73 per cent. of the public commercial vehicles represented by its memberships.

10.14—Early Efforts to Stabilize the Rate Situation. Beginning in 1930, a committee of the Association commenced the preparation of a freight classification and rate tariff for motor transport vehicles, reporting to the Association on June 4th, 1932. The committee recommended:

- (1) The adoption of a system of uniform rates to be strictly adhered to.
- (2) The adoption of a five-class freight classification, as drafted by the committee.
- (3) The adoption of class rates based on railway rates for classes 1 to 5, except that when the first class rate exceeded 57 cents the transport rates were to be higher, in cents, by the following arbitraries:

Class 1	Class 2	Class 3	Class 4	Class 5
10	8	6	5	4

First-class railway rates exceeded 57 cents for a movement of approximately one hundred miles. Railway rates, at that date, did not include pick-up and delivery services, while motor transports provided such.

The purpose of these recommendations was to regularize the rate situation. Motor transports were carrying freight at all-commodity rates, without attempting to classify it and often without much appreciation of the cost. The slogan of some of the carriers at the time was "We give express service at freight rates." There was consequently a desire to stabilize the rates themselves, as well as firm them up in certain localities.²⁵

Prior to any action being taken by the Association or individual transport operators, competitive railway express rates were put into effect west of Toronto, and on March 6th, 1933, the all-commodity pick-up and delivery railway freight tariff was introduced covering the same territory.²⁶

The interjection of these highly competitive rates altered the entire situation, and nullified the efforts of the Association to improve rate conditions. The railways in order to compete had adopted the all-commodity basis of rates, at the moment when the better organized truckers were attempting to do away with it.

²⁵Evidence, p. 7953.

²⁶Evidence, p. 7961.

Rate cutting was the order of the day. It is difficult to fix responsibility for it. Mr. Pape's view in this connection is interesting: "I don't think anybody can definitely say who started the cutting. The reason you could not point to the trucks and say that they started the cutting was that it was not any organized cutting of rates. They had no rate structure; the freight was there to move, and they took it at what they considered a rate they could make money on." He considered that the encouragement of rate cutting by the shippers was undoubtedly a factor.²⁷

10.15—Present Status of the Association's Tariff. Following the return of the railways to class tariffs in Western Ontario, on the publication of their present pick-up and delivery tariff, in June, 1937, the Association made a further attempt to stabilize the rate situation, and a motor freight classification and rate schedule, fashioned after that of the competitive railway tariffs, was adopted in the hope that carriers generally would utilize it. Many operators made an attempt to introduce this basis of rates, but were unable to do so, in the face of refusal of other transport operators to conform.

The rate structure recommended by the Association was the railway pick-up and delivery schedule of rates with certain exceptions. Where the railway first class rate basis is 24 cents to 29 cents, the motor transport basis is constant at 24 cents. Where the railway basis is 30 cents to 36 cents, the motor transport basis is constant at 30 cents. For a movement of over 40 miles the basis is the same. A comparison of these rates is given in Table 10.3.

To compete with express rates, where the transport base rate is 30 cents or less, the minimum charge is 35 cents against the railway freight 50-cent minimum.

It is important to note that whereas in the recommendations of 1932, motor transport rates were equal to railway rates on the shorter hauls, and above them on longer hauls, the recommendations of 1937 call for less than railway rates on short hauls and the equivalent of railway rates on longer hauls. However, in 1932, the railway rates did not include pick-up and delivery.

Under the tariff recommended by the Automotive Transport Association, minimum class rates extend over a distance of approximately twenty-two miles, with the next stage in rates covering movements up to as much as forty miles. Beyond this distance they are the same as railway pick-up and delivery rates.

Being arbitrarily developed from railway rates, only in a general way does the Automotive Transport Association tariff bear a relation to highway distance. To a very limited extent has this recommended tariff been used by the various operators, due to the wholly disorganized nature of the motor transport industry and the wide differences of opinion held by the various operators in the light of their own individual problems as to what should be done.

In view of what has been stated in Art. 9.12, it will be noted that if the points of origin and destination are large centres with expensive pick-up and delivery costs, not until a haul of forty-eight miles is reached do the Automotive Transport Association rates for third and fourth group goods meet the minimum costs for the movement, and that up to distances of twenty-two miles, fourth group rates barely meet the cost of transporting such goods between the small centres, even on the present basis of wages and hours.

²⁷Evidence, p. 7965.

Table 10.3—Comparison of the Railway Pick-Up and Delivery Rates in Cents per 100 Pounds With That Recommended for Motor Transport by the Automotive Transport Association of Ontario, 1937

Approx. Maximum Haul, Miles	Railway P. and D. Rates				Automotive Transport Association Rates			
	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
10	24	21	18	15	24	21	18	15
16	25	22	19	16				
22	29	25	22	18				
24	30	26	22	19				
28	32	29	25	19				
40	36	32	27	24	30	26	22	19
48	40	34	30	25				
					40	34	30	25

For a movement of over 40 miles, the railway pick-up and delivery and the Automotive Transport Association rates are the same.

With the preponderance of fourth group goods in motor truck haulage, and the large proportion carried either to or from the larger centres, it is apparent that the short distance rates do not begin to offer sufficient margin to improve conditions of wages and hours.

SECTION 6—MOTOR TRANSPORT RATES: THEIR ORIGIN, DEVELOPMENT AND PRESENT BASIS

10.16—Railway Rates the Original Basis. There was general agreement in the evidence that when commercial motor transport was first introduced in Ontario the basis of charges was that of equivalent railway rates, and that any departure from original rail rates had been largely occasioned by competition, first within the industry, and latterly from the railways.

For example, when Smith Transport, Ltd., commenced operations, in 1921, its rates were the same as railway rates. But for such it provided pick-up and delivery service, as well as the inherent advantages of the motor truck, namely, small shipments moving directly and expeditiously from door of shipper to door of consignee.

Similarly, the rates of Carr Transport and Movers were originally set at railway levels, in 1929, and competition with the railways was entirely in matters of service²⁸. Marks Transport, on commencing business in 1925, adopted railway rates, since the costs of operation were not then known to the company.

10.17—Modifications in Rates. *Voluntary Reductions.* The development of improved roads, the introduction of larger and better equipment and the avoidance of unprofitable haulage rendered it possible for a typical large operator, Smith Transport, Ltd., to make voluntary reductions of rates when

²⁸Evidence, p. 2936.

approached by shippers, through special agreements with various customers, although reductions in rates were not made to everyone.²⁹

Selection of freight has heretofore been possible to motor transport operators without direct refusal, by the simple device of quoting a prohibitive rate to any shipper offering unprofitable business.³⁰

Only very slight reductions in rates were made prior to 1933. According to Mr. Joseph Gutmann, of Smith Transport, whose evidence was particularly valuable, the rates of his company, before competition became exceedingly keen, were 3 to 4 cents below railway rates, but included pick-up and delivery, which the railway rates did not. In general, the company's rates were from 5 to 10 per cent. lower than railway rates. Even where they were higher, the provision of free pick-up and delivery service resulted, all things considered, in their never being actually higher than railway rates.³¹

Forced Reductions. The drastic reduction of motor transport rates that has come about in the past five years has been forced by severe competition within the industry and with other forms of transport, particularly the express and freight departments of the railways. So important is this that special consideration will be given to it in Sections 7 and 8.

10.18—Attitude of Shippers to the Rate Level. A highly important influence in the shaping of the present rate structure, such as it is, has been the willingness or unwillingness of the shipper to pay the quoted rates.

Numerous references were made in evidence to the practice of certain shippers in setting one operator, or one transport agency, against another with a view to effecting a rate reduction.

Mr. M. E. Clarke, of M. E. Clarke Transport, stated that there is much dictation by large shippers, frequently under the threat of operating their own trucks.³² They offer a rate below the one asked and refuse to pay the charges as billed.³³

According to Mr. Teakle, of Martin Transports, Ltd., shippers are playing one transport against another in an effort to secure lower rates.³⁴

Unfortunately, many shippers place quality and dependability of the service offered below cheapness and refuse to continue with one trucking organization if another can be found that will move the goods at a lower rate.

Mr. W. R. Caldwell, Traffic Manager, Canadian Cannery, Ltd., informed the Commission that "in many instances where we continue to do business with the man that has the higher rate, the trade will immediately draw to our attention that so and so is carrying goods by another trucker at so much, and consequently to ship goods by him only."³⁵

On the other hand, it was made evident that many important shippers with sound appreciation of the need of a healthy transport industry in the Province were prepared to pay whatever rates were deemed proper and fitting.

The late David Sturrock, Traffic Manager, Lever Bros., Ltd., observed: "We have never tried to get the lowest rates by truck. I think I can honestly

²⁹Evidence, p. 3026.

³⁰Evidence, p. 3034.

³¹Evidence, pp. 3029, 3030, 3033.

³²Evidence, p. 2171.

³³Evidence, p. 2137.

³⁴Evidence, p. 3454.

³⁵Evidence, p. 5589.

say I have never chiselled a rate. We have required service first and rate second I have raised them on several occasions because I felt that the truck line could not operate at a profit and we could not get the service, and I did not want to have my distribution stopped over-night because somebody had seized their trucks.³⁶”

The attitude of Mr. James Brindle, out-of-town shipper, James Lumbers Company, Ltd., was expressed thus: “I do not think an operator should be allowed to under-quote the railway for fourth class rates.”³⁷”

Mr. Richard Winfield, Traffic Manager, British American Oil Co., Ltd., said: “Well, there is no bargaining with them at all. We simply tell them we will pay them railway rates, and we maintain the railway rates for the transport companies. . . . One reason is that transports are all good customers of ours and we sell them gasoline and oil, and even with those conditions, we are offered lower rates than the railway rates, and in fact, we often increase accounts that we receive from the transports to the measure of the railway rates.”³⁸”

Mr. William Ingram, who is in charge of transportation for Swift Canadian Company, Ltd., thought that “we could take our chances on any set of rates which would be regulated.”³⁹”

Mr. Charles LaFerle, Traffic Manager, The Robert Simpson Company, Ltd., said in evidence, respecting the great variation in rates quoted by different operators: “We have that condition today, but as far as we are concerned we do not care if there are another hundred tariffs. We do not use them; we use the one we know is sound and we know it is giving the public service, and it is giving service to the customers, and if we start going to the nine-cent operator, then we will get just what we are inviting, that is all.”⁴⁰”

Mr. John H. Hiscox, Traffic Manager, The T. Eaton Company, Ltd., referring to undercutting by motor transport operators declared: “We do not entertain it and we do not by any means take the man who offers the lowest rate It is a question of service rather than rates which gets the business from us When this transport business first came into being, they gave us a service we really needed and it would hardly be fair, because somebody who has come on the run since offers us a few cents less, to take the business away from the man who gave us the service when times were not so good If we do not give him a decent rate we cannot expect a decent service.”⁴¹”

10.19—General Absence of a Fixed Basis for Rates. Consideration of the evidence clearly indicates the general lack of a fixed or scientific basis for the rates charged by operators of freight motor vehicles. From the many representations respecting rates made to the Commission one simple fact emerges: the operators in the great majority of cases have no other rule than to make the best bargain possible with the shipper and hope that earnings will be a little more than the cost of operating the business.

Mr. Albert J. Litwin, of K. and L. Motor Express, Ltd., stated that his company had no basis of charging freight rates; that they had set up rates of their own, based on their costs of operation and conditions in the industry

³⁶Evidence, p. 7378.

³⁷Evidence, p. 7501.

³⁸Evidence, p. 5869.

³⁹Evidence, p. 5744.

⁴⁰Evidence, p. 6097.

⁴¹Evidence, p. 5528.

and representing rates the company would like to get; that they would not take any business from any new customers at rates below this tariff; that they made an attempt to establish Automotive Transport Association rates, and having lost business through it had to adopt their own rates.⁴²

Martin Transports, Ltd., makes private rates, there being nothing to prevent it, and having to do so by force of circumstances. The company admittedly discriminates between customers. It will reduce a rate rather than lose business, if the reduced rate is considered profitable, but only under compulsion. It has no way of telling whether the pressure comes from the shipper or from a competitor.⁴³

Marks Transport endeavoured to adhere to the Automotive Transport Association's classification and tariff but had to abandon it in order to continue in business. Mr. Marks stated that he now has to make the best bargain he can with respect to each class and each shipper. He now quotes rates as near those of his competitors as he possibly can, without any relation to cost or to railway rates.⁴⁴

Mr. Burford, of Burford Transport, operates at rates representing generally what the shipper is prepared to pay, admitting that he had to "make a bargain pretty nearly every time."⁴⁵

Mr. David Sylvester, of Wm. Winters Transport, of St. Catharines, reported that his company had no uniform rates. In agreement with other operators in the Niagara peninsula, the company attempted to put in Automotive Transport Association rates when first published, but "if those rates went into effect one hundred per cent. the business would be passed up owing to the fact they were practically the same as rail, and owing to the fact that there were a lot of 'C' operators in the peninsula." The increase was hence confined to collect shipments where the consignee pays at the time delivery is made, and to new customers, but the arrangement was not lived up to by all of the operators.

Wm. Winters Transport rates have been fixed to a certain extent on the basis of the cost of operation, but seventy-five per cent. on competition. The company makes the best bargain it can for the transportation of goods.⁴⁶

Of the tonnage carried by Smith Transport, Ltd., 75 to 85 per cent. is carried under special contracts, and the rates arranged with the various shippers for equivalent movements are not necessarily the same.⁴⁷ When a rate is requested by a shipper to meet rail competition, the company does its best to meet the situation, or abandons the movement.

10.20—A Proper Rate Basis. Almost alone, amongst the many witnesses who testified respecting rates, Mr. Gutmann, of Smith Transport, Ltd., favoured individual arrangements with shippers, and expressed opposition to rate regulation in any form, at least for the present.⁴⁸ It was his opinion that the only way of determining rates for highway operations is by actual experience and competitive requirements; that rates should vary according to the oper-

⁴²Evidence, pp. 2566, 2572, 2578.

⁴³Evidence, pp. 3443-3445.

⁴⁴Evidence, p. 2337, 2352.

⁴⁵Evidence, p. 1870.

⁴⁶Evidence, pp. 4365-4371.

⁴⁷Evidence, p. 3101.

⁴⁸Evidence, p. 3056.

ator's costs and the profits he wishes to make; and that considerations such as rapidity and volume of movement are important factors.⁴⁹

All freight carried by Smith Transport is under one classification, as the company's experience is that if low class goods are carried at a low rate, the shippers want that rate to apply to all goods, since it costs no more to carry first or second class goods than third class goods. An exception is made in the case of bulky goods of light weight which are subject to special quotations. Goods are carried different distances at the same rate, *e.g.*, the rate from Hamilton to either Port Hope or Kingston is 50 cents per hundred pounds.⁵⁰

Mr. George Carr, of Carr Transport and Movers, who favoured both fixing and enforcement of rates by a government board, stated that the rates of the group of seven or eight operators in the Lake Huron-Georgian Bay section who had jointly agreed upon a tariff of rates correspond with pick-up and delivery rail rates, but with some modifications in classification in order to compete with express rates.⁵¹

According to Mr. Teakle, Martin Transports endeavour to arrange their tariff so as to yield a return on the business done. While the company may lose on one commodity, and make a profit on another, the two combined yield a profit.

Mr. Gordon Strathdee, of Strathdee Transport, favoured classification of goods but thought three classes were ample. At present he has only two classes and his rates run between second and fourth class railway rates.⁵²

The service supplied by long-distance furniture movers, or Class "H" operators, is something more than transport service, and the rates to be charged are not directly comparable with those of purely transport services. There is a difference of opinion among the operators as to whether rates should be based on a weight basis, or on a cubic capacity basis. Manifestly, this is a matter to be settled primarily by the industry itself.

Due to the essential difficulties of the rate situation, it is obvious that workable tariffs of rates can be formulated only after careful study by the industry itself and adherence to them can be secured only by the exercise of governmental authority.

As a result of its analysis of all available cost data, which, due to the failure of most operators to keep dependable and comprehensive statistical records, are fragmentary, the Commission is of the opinion that any rate which is less than one tenth of a cent per hundred pounds per mile, plus four cents per hundred pounds in the case of "C" operations, and plus a further nine to fifteen cents per hundred pounds, depending upon the points of origin and destination, in the case of "A" operations, represents unremunerative operation, if not unfair competition.

It would point out, however, that rates materially higher than the above may be neither remunerative to the transport operator nor in any sense fair rates, but it is satisfied that average rates below this level, are unreasonable. Particular movements can, of course, be made for lesser tolls than those indicated above, but the stabilization of the transport industry as a whole depends on freight classification and adherence to that classification with the appropriate rates from time to time applying thereto.

⁴⁹Evidence, pp. 2995, 3016, 3212.

⁵⁰Evidence, pp. 3094-3098.

⁵¹Evidence, p. 2852, 2872.

⁵²Evidence, p. 2711.

SECTION 7—COMPETITION WITHIN THE MOTOR TRANSPORT INDUSTRY

10.21—Reduction of Rates Arising Out of the Depression. Due to the chaotic labour conditions existing during the depression, many people entered the transport field in 1932 and the year following, often with limited experience and but little capital.⁵³ Manufacturers, anxious to keep inventories small in order to save as much as possible during those years, in many cases turned to trucks, since they provided rapid deliveries in less than carload lots, on which they could not get preferential rates from the railways.⁵⁴ The result was a great increase in the use of trucks and in the number of transport operators.

10.22—Internal Competition the Principal Cause of Rate Chaos. Many operators expressed the view that the existing chaos in the rate structure is due primarily to competition within the motor transport industry itself.

Mr. Strathdee asserted that his rates were mostly cut by truck competition, from both large and small companies, and that he has not felt rail competition much.⁵⁵

According to Mr. Carr, the advantages of truck service enabled transport operators out of Owen Sound always to get rail rates, and any rates below these were due to competition within the transport industry.⁵⁶

The competition experienced by Burford Transport is not from water or rail carriers, but from Class "B" and Class "D" operators and private commercial vehicles.⁵⁷

Mr. Marks' competition comes entirely from other motor transport operators. His hauls are short and his service so arranged that the railways cannot compete. He was not aware of any rate cutting on their part to meet his competition.⁵⁸

Mr. Sylvester, of Wm. Winters Transport, found the chief competition to arise from within the trucking industry itself.⁵⁹

Mr. W. R. Caldwell, Traffic Manager, Canadian Cannery, Ltd., agreed that certain rates quoted to his company by truckers represented simply "cut-throat" competition. The reduction of rates on canned goods to the present low levels has come about through the competition of truckers and his company cannot afford to adhere to the rates formerly paid when competitors are paying a lower rate.⁶⁰ Typical rates paid and their relation to the standard rates of the Automotive Transport Association and to the railway P. and D. rates are given in Table A10.2 of Appendix A-X.

Indicative of the general chaos was the remark of Mr. Sturrock: "Nobody knows, under present conditions, what the bottom rate is."⁶¹

Competition between motor transports is exceptionally keen between Toronto and Hamilton, over fifty transport companies operating between these points.

⁵³Evidence, p. 3034A.

⁵⁴Evidence, p. 3399.

⁵⁵Evidence, p. 2708-2710.

⁵⁶Evidence, p. 2936.

⁵⁷Evidence, p. 1935.

⁵⁸Evidence, p. 2340.

⁵⁹Evidence, p. 4379.

⁶⁰Evidence, pp. 5596, 5698.

⁶¹Evidence, p. 7389.

Of the 2,138 instances of rates coming immediately to the attention of the Commission, 123 were for transport between Hamilton and Toronto. The goods transported in these instances were highly diverse, and appeared to afford a fair cross-section of motor transport traffic. There were 16 instances of first group goods, 19 of second group goods, 32 of third group goods, and 56 of fourth group goods. The average rates charged were 22.2 cents, 19.4 cents, 17.4 cents and 14.2 cents, compared with Automotive Transport Association rates of 30 cents, 26 cents, 22 cents and 19 cents. They represented discounts from Automotive Transport Association rates of 26 per cent., 25 per cent., 21 per cent. and 25 per cent., respectively. A general discount from Automotive Transport Association rates on this run approximates 25 per cent., compared with the discount of 15.7 per cent. for motor transport operations as a whole. The overall average rate charged was 17 cents, or six cents below that which the studies of the Commission indicated would be a reasonable minimum.

It is worthy of comment that the greatest reductions from the respective group rates were disclosed by shippers, a circumstance that lends support to the statement made many times in evidence that the rates obtainable from "B," "C," "D," "F" and smaller "A" operators were exceptionally low, and the reason for much of the chaos in the industry.

10.23—Avoidance of Running Light on Return Trips. One of the principal sources of severe competition amongst motor truck operators is the desire to avoid making return runs with vehicles light. Whatever revenue is obtained in excess of the out-of-pocket expenses added to look after handling and hauling a return load is so much to the good. The problem is, of course, not a new one, being constantly before the railways in the form of the "added load" principle.

The disorganizing effect on the rate structure of quoting exceedingly low rates in order to attract a return load is obvious. Mr. Joseph Atkinson, Jr., considered this to be one of the troubles with the industry.

An instance of this shattering effect on the rate structure is that cited by Mr. Clarke. The rate on feed from Toronto to Seaforth was 22 cents until the "E" and "F" class operators were allowed to haul it, and they took it as return loads at whatever they could get for it, for example, as little as ten or fifteen cents.⁶²

Mr. Sturrock was emphatically opposed to the practice. In his view "one-way rates have been the curse of the industry."⁶³

On the other hand, Professor Sissons held it highly desirable that equipment should travel loaded in both directions, thus: "I submit it is contrary to common sense to fix rates which will make it a normal thing for a trucker to bring up cattle, and go back light, or for another trucker to be taking down fertilizer, and going back light."

"I consider that is bad economics to set your rates on the supposition that a truck or train or ship will travel only one way loaded or will travel one way light."⁶⁴

Mr. Gutmann's opposition to the standardization of rates was based in part on the desirability of allowing a carrier to fill up partially loaded vehicles by tonnage that could be carried cheaply if at the carrier's convenience.^{64a}

⁶²Evidence, p. 2172.

⁶³Evidence, p. 7385.

⁶⁴Evidence, p. 7218.

^{64a}Evidence, p. 3172.

SECTION 8—EXAMPLES OF RAILWAY AND TRUCK RATES

10.24—Comparison on the Basis of a Sampling Survey. Due to the intense competition within the industry itself and the resultant great variation in the rates charged by various truckers to move the same commodity the same distance, any general comparison of rates with railway rates is difficult.

During the progress of the enquiry, 2,138 instances of rates charged by operators holding Class "A" licenses came to the attention of the Commission. While this number represents but a small fraction of the individual rate transactions in any month, it is believed that it provides a very fair, if narrow, cross-section of the rates charged by motor transports on less-than-truckload shipments.

As a basis of comparison, the rates as charged in each of the 2,138 transactions were expressed as a ratio of the rate recommended by the Automotive Transport Association of Ontario for such shipment. Having regard to the substantial number of the ratios so determined, the average of these, namely 0.843, gives as fair an idea as may readily be obtained concerning the relative level of motor transport rates actually being charged to the scale recommended by the Automotive Transport Association.

In the 2,138 instances mentioned, there are 313 for which the Automotive Transport Association's recommended rate is less than the railway pick-up and delivery rate. The average of the individual ratios of Automotive Transport Association to railway pick-up and delivery rates in the 2,138 cases is 0.968, and the ratio of the rates actually charged to corresponding railway pick-up and delivery rates, 0.817.

The general conclusion of this analysis is that for the general run of package and L.C.L. freight carried within the competitive zone, for what the railways under the pick-up and delivery tariff charge \$10.00 to transport, the Automotive Transport Association recommends its members to charge \$9.68, and the operators actually accept \$8.17.

No similar comparison was possible between railway commodity rates and full truck load rates, but the general tenor of the evidence was that competition from railway carload freight rates had been severely felt by some at least of the motor transports.

10.25—Reductions of Motor Transport Rates Due to Railway Competition. Many references were made in evidence to reductions in motor transport rates that had to be made because of the competition of the express and freight departments of the railways. A few characteristic cases of these will be cited.

Mr. A. J. Litwin, of K. and L. Motor Express, Ltd., regarded competition among the motor transports as keenest for third and fourth class freight, where there is a large tonnage offering. Competition from the railways has largely been felt in connection with first and second class freight, for which the railways have changed their classifications and decreased their minimum car loadings. Initial reductions in rates were made by the railways, and the motor transport companies did not at first reduce rates below railway levels.⁶⁵

A very striking example of reduced rates occasioned by the introduction of the railway all-commodity, pick-up and delivery tariff on March 6, 1933, was in respect of furniture, due to the virtual elimination of packing restrictions. The reduction made June 1st, 1935, for shipments weighing one thou-

⁶⁵Evidence, p. 2674.

sand pounds or more meant a sweeping change in furniture rates, and a practical elimination of this commodity from motor transport business.

K. and L. Motor Express, Ltd., used to receive from \$3.50 to \$4.00 for the transport of chesterfield suites from Kitchener to Toronto, which was approximately the railway charge with cartage added. The business was lost when the railway commenced to haul them from door to door under a special rate for \$1.28.⁶⁶

Mr. Carr, of Carr Transport and Movers, reported a similar experience with respect to the haulage of furniture from Owen Sound to Toronto.⁶⁷

Mr. Goodale, of Goodale Transport, Ltd., had been hauling dining room suites of approximately one thousand pounds' weight from Stratford to Niagara Falls charging 65 cents per hundred pounds for private house delivery and 60 cents for store delivery. When the railway rate was reduced to 44 cents per hundred pounds and to 34 cents if the shipment was over one thousand pounds, the railways took the business.⁶⁸

Mr. Burford, of Burford Transport, gave similar testimony concerning the transport of chesterfields from Toronto to Picton.⁶⁹

Rates on the haulage of sugar have undergone a drastic downward revision in recent years, with the result that motor transport has lost most of the business.

Mr. Kingsley, of Kingsley Transport, was formerly largely engaged in hauling full truck loads of sugar from Toronto to Orillia. He originally received 20 cents per hundred pounds for sugar in truck loads, or mostly full truck loads, from the steamer dock in Toronto to Orillia, but this rate had been reduced to 15 cents by truck competition and customer pressure. The business disappeared entirely when the railways, because of water competition, put into effect a summer commodity rate on sugar from Montreal to Orillia of 22 cents per hundred pounds in minimum carloads of 40,000 pounds. The railway L.C.L. (P. and D.) rate of 34 cents and the carload rate of 27½ cents, Toronto to Orillia, was undisturbed.⁷⁰

It was pointed out on behalf of the railways that this commodity rate of twenty-two cents represented, for 1936, a revenue of \$4.40 per ton against an average revenue for all freight on the Canadian National System of \$3.35 per ton.

The normal rate for sugar in carload lots, Montreal to Orillia, is 43 cents with a minimum weight of 24,000 pounds per car, representing a revenue of \$103.20. Under the rate introduced to compete with water and truck transportation the revenue per car was \$88.00, or 21 cents per mile for the 415 miles.⁷¹ It is of interest to note that this is a direct movement from shipper to consignee, which is one of the chief virtues claimed on behalf of the motor truck.

Carr Transport and Movers hauled sugar in 1930 and 1931 from the dock in Toronto to Owen Sound at a rate of 25 cents per hundred pounds in truck-load lots. In 1932 the railways put in storage at Owen Sound and hauled

⁶⁶Evidence, pp. 2625, 2650, 2589B, 2674.

⁶⁷Evidence, p. 2879.

⁶⁸Evidence, p. 4624.

⁶⁹Evidence, p. 1984.

⁷⁰Evidence, pp. 1679, 1726, 1755.

⁷¹Evidence, p. 1756.

sugar by rail direct from Montreal at a rate of 24 cents and this business was ended.⁷²

Canned goods is another commodity which, due to competition, is handled at very low rates. It represents almost ideal truck freight. The price of the goods being highly competitive, there is constant pressure from shipper and consignee to keep transport charges as low as possible.⁷³ The competition of water carriers is also a factor.

Until the summer of 1936, Burford Transport had a rate on canned goods from Picton to Ottawa of 20 cents per hundred pounds for full loads and 25 cents for less than truck loads. The railway cut to 17 cents on carload lots and Burford Transport had to follow suit.

Severe rate cutting occurs in the haulage of general groceries. Twenty-four examples of rates paid by National Grocers, Ltd., are given in Table A10.3 of Appendix A-X. They average 77.2 per cent. of the respective Automotive Transport Association fourth class rates and 76.2 per cent. of the railway P. and D. rates.

Feeds are a fourth class product for the transport of which rates are very low, due to the competition of Classes "E" and "F" licensed operators.

The M. E. Clarke Transport for six years hauled a considerable quantity of feed from Toronto to Seaforth for an elevator company, originally at a rate of twenty-two cents, but under competition from Classes "E" and "F" operators, who hauled it for any price they could get, his price latterly was fifteen cents per hundred pounds.⁷⁴ In the summer of 1937, when an attempt was made to establish better rates, a rate of 27 cents was suggested instead of 15 cents. The elevator company then established a warehouse in Mitchell, and shipped to it by rail at a rate of 8½ cents in carload lots.⁷⁵ From Mitchell the feed was distributed to Seaforth and other towns in the area by a local operator.

SECTION 9—RAILWAY PASSENGER FARES

10.26—Development of Railway Passenger Fare Structure. All passenger fares without exception are published in tariffs filed with the Board of Transport Commissioners for Canada. They are based on Canadian conditions and are not the result of any international arrangement.

By order of the Board No. 213, March 17, 1918, the standard passenger fare was set at 3.45 cents per mile, being a 15 per cent. increase over the fare of three cents originally authorized. By Order No. 308, September 13, 1920, the standard passenger fare was increased by 20 per cent, with a maximum of four cents per mile, to be reduced as of January 1, 1921, to 3.795 cents per mile and as of July 1, 1921, to 3.45 cents per mile, where it has remained.

10.27—Present Railway Passenger Fares. Round trip, first class, six months limit fares are 10 per cent. less than double one-way fare, or 3.105 cents per mile. As of June 1, 1936, the railways voluntarily established station to station coach fares on a basis of three cents per mile one way and 2.7 cents per mile round trip.

⁷²Evidence, p. 2881.

⁷³Evidence, p. 5589.

⁷⁴Evidence, p. 2172.

⁷⁵Evidence, p. 2069.

Less than maximum standard fares are authorized for tickets on sale daily, or from time to time as occasion may warrant. Some of these are permitted under the Railway Act, such as for commercial travellers, the clergy, members of the press, and charity. Others are authorized to stimulate traffic, such as company coach excursions and organized society excursions, or for charitable purposes, or to assist in placing settlers on the land, as well as the relief of unemployment under Government auspices. There are also special fares for students attending schools or colleges, for persons attending fairs or exhibitions, for military and police transportation, and commutation rates in suburban zones.⁷⁶

Other than suburban commutation fares, which have a minimum of 7.5 cents per ride, the lowest authorized first class rate, with one exception, is 1.725 cents per mile, granted, in the main, for charitable purposes, or as special rates to fairs and exhibitions. The exception is a rate of 1.5 cents to persons attending Army and Navy Veterans' conventions, or travelling as a member of an organized excursion with one hundred participants guaranteed. The corresponding rates for coach class are 1.5 cents and 1.0 cents per mile, the latter also being the rate (with a minimum of 75 cents) authorized for the so-called coach excursions.

Under the above tariffs, the average passenger mile revenue on the Canadian National Railways in Canada, in 1936, was 2.035 cents per mile,⁷⁷ and on the Canadian Pacific Railway it was practically the same.⁷⁸ The corresponding figure for Ontario only cannot be segregated.

The Temiskaming and Northern Ontario Railway has the same fares as the two major railways, with the addition of a second class rate of 2½ cents per mile. This was inserted to permit the segregation of labouring class passengers at one end of the coach on branch line services.⁷⁹ On the Temiskaming and Northern Ontario Railway bus service between Porquis and Iroquois Falls the fares are based on a rate of three cents per mile, the minimum permitted by the Ontario Municipal Board.

Railway passenger rates are essentially arbitrary, as it is impossible to segregate costs of passenger movements and of freight movements. The standard fare rate per mile is higher in Ontario than in the United States.

SECTION 10—INTERURBAN BUS FARES

10.28—Basis of Interurban Bus Fares. The Public Vehicle Act grants the Department of Highways the right to approve or prescribe fares.⁸⁰ The Department insists that the rates charged by all operators between the same points shall be equalized, and that where no competitive transportation exists, an operator's rates shall not be unduly out of line with his rates in areas where such does exist.⁸¹ There is no standard rate.⁸²

Few excursion, special or commuters' rates are offered, but return fares are sold at an addition of 80 per cent. over standard one-way fares. The larger operators grant a 10 per cent. discount when ten or more people travel to-

⁷⁶Evidence of Mr. W. E. Norton, pp. 149-154.

⁷⁷Evidence, p. 159.

⁷⁸Evidence of Mr. James C. Glendenning, p. 182.

⁷⁹Evidence of Mr. R. P. C. McLeod, p. 185.

⁸⁰R.S.O. 1937, c. 289, s. 6.

⁸¹Brief of Ontario Association of Motor Coach Operators, p. 21

⁸²Evidence, p. 8435.

gether, as well as on commuters' rates where warranted, and a 10 per cent. discount on single fares to commercial travellers.⁸³

Mr. Foster, for Gray Coach Lines, Ltd., in his evidence stated: "Our rates are not predicated on any railway rates. A great many of our rates have been a heritage from lines we took over, although we have adjusted them to some extent. . . . There are conditions to be considered such as the density of traffic and the operating costs. . . . We have endeavoured to set a rate that is satisfactory to the public, and which will afford us a reasonable return."⁸⁴

It was admitted on behalf of Gray Coach Lines, Ltd.,⁸⁵ that all its routes were not profitable, but that such routes are continued in operation at a loss in the anticipation that traffic will grow, and to provide a necessary service. It is realized of course, that, indirectly, such lines may bring revenue traffic to the system's other lines, which warrants their continuance.

Fares charged have only an indirect relationship to cost. Arbitrarily arrived at, if the result of a period of operation shows substantial excess of revenues above costs, the rate will be ultimately forced down by competition of one kind or another. If the operation shows a loss, rates will ultimately be raised sufficiently to wipe out the loss, if public opinion will permit the change, and always subject to the law of diminishing returns.

10.29—Comparison of Railway and Bus Fares. The Ontario Association of Motor Coach Operators submitted a table of regular one-way and round trip fares, both by motor coach and by railway from Toronto to fifty-seven points in Ontario, with the respective mileage and rates per mile in each case. This table is given as Table A10.4, of Appendix A-X.

From the table it is seen that the arithmetic averages of the one-way rates per mile charged by the railways and motor coach operators in the fifty-seven instances submitted, is 2.95 cents for the railways, and 2.50 cents for the motor coach operators, or 15 per cent. below railway fares.

Although in thirty-six out of the fifty-seven cases, distances are longer by highway than by rail, only in two cases is the coach fare higher than the rail fare, and in four cases it is equal to the rail fare. Only in ten cases are railway fares more than 5 per cent. different from the railway average rate, while in thirty-eight cases, coach fares are outside the same percentage range for coaches. It is quite apparent that coach fares have been set to be equal to or less than rail fares between the same terminals, irrespective of distance or the rate per mile necessary to accomplish such.

Typical of such practice are the fares from Toronto to Windsor, Owen Sound and Midland, as indicated in Table 10.4.

The two exceptions to a lower coach fare irrespective of distance are on the runs from Toronto to Collingwood and to Peterborough. Rail distance to Collingwood is 99.4 miles, highway distance 105.8 miles; rail fare, \$2.25, coach fare, \$2.75; rail rate 2.38 cents per mile, coach fare 2.61 cents per mile.

Rail distance to Peterborough is (*via* Canadian Pacific) 76.6 miles; highway distance 93.9 miles; railway fare is \$2.30, coach fare \$2.50; railway rate 3.0 cents, coach rate 2.66 cents.

⁸³Evidence, p. 8436.

⁸⁴Evidence, p. 8433.

⁸⁵Evidence, pp. 8347, 8483.

It is interesting to compare, as is done in Table 10.5, rates on trips of approximately the same length, *e.g.*, for short runs, to Burlington, Newmarket and Oshawa, and for longer runs to Chatham, Kingston and Sundridge.

Table 10.4—Relation of Passenger Fares by Railway and by Highway From Toronto to Windsor, Owen Sound and Midland

	Distance		Fare		Rate, Cents Per Mile		Relation to Average Rate	
	Rail	Hwy.	Rail	Hwy.	Rail	Hwy.	Rail	Hwy.
Toronto to:								
Windsor	230.0	266.1	\$6.40	\$5.10	2.78	1.92	6 % lower	23 % lower
Owen Sound ...	128.8	145.7	3.60	3.40	2.80	2.34	5½ % lower	6½ % lower
Midland	118.8	90.6	3.05	2.65	2.57	2.92	16½ % lower	16½ % above

Table 10.5—Comparison of Railway and Bus Fares for Typical Short Runs

Toronto to:	Distance		Regular Fares		Rates, Cents per Mile	
	Rail	Highway	Rail	Highway	Rail	Highway
<i>One Way</i>						
Burlington	32.0	35.4	\$0.95	\$0.90	2.96	2.54
Newmarket	34.1	30.2	1.00	0.90	2.93	2.98
Oshawa	33.3	32.4	1.00	0.85	3.00	2.62
Chatham	184.4	191.5	5.40	4.25	2.92	2.22
Kingston	160.8	167.4	4.85	4.00	3.02	2.39
Sundridge	183.2	177.1	5.50	4.90	3.00	2.76
<i>Return</i>						
Burlington .....	....	....	1.70	1.60	2.65	2.26
Newmarket .....	....	....	1.80	1.60	2.64	2.65
Oshawa .....	....	....	1.80	1.55	2.70	2.39
Chatham .....	....	....	9.70	7.65	2.64	2.00
Kingston .....	....	....	8.75	6.00	2.72	1.79
Sundridge .....	....	....	9.90	8.80	2.70	2.48

From this comparison it is seen that while railway fares have a fairly consistent relationship to distance, coach fares vary widely. It seems not unfair to conclude that a first consideration has been to provide a differential with rail rates, after which the rates are set to yield maximum revenue on the specific operation.

CHAPTER XI

REGULATION OF COMMERCIAL MOTOR VEHICLE OPERATIONS

SECTION 1—INTRODUCTION

11.1—Necessity of Regulation. It was early recognized in Ontario that despite the common law right of every subject to the use of the highways, some regulation of the traffic on them was necessary. A year after Confederation the Legislature of the Province, in an Act to Amend the Municipal Institutions Act of Upper Canada¹, provided that the council of any county having non-toll gravel or macadamized roads under its jurisdiction and control should have the power to regulate and license all vehicles kept for hire, to issue teamsters' licenses, to regulate the width of tires, and to establish rates of fare that might be collected by owners or drivers, both for goods or passenger vehicles.

From time to time the regulations were modified in order to shape them to the needs of a developing community. The responsibilities of the users of the highway in turning out and giving way to other users were clearly formulated. Restriction to decorous uses was demanded as late as the nineties. For example, no person was permitted to race, shout or use any blasphemous or indecent language on the highway and certain measures were to be taken in respect of drunken persons. Bells were required to be carried on sleigh horses and no travel faster than a walk was permitted on bridges.

In accordance with the Act to Regulate the Speed and Operation of Motor Vehicles on Highways²--the precursor of the present Highway Traffic Act--the liberties of motor vehicle operators were also restricted. Such persons were required to pay a registration fee and display licence plates. A bell, gong or horn was to be sounded to notify other persons of the approach of the vehicle. Lights were to be carried at night and the speed was regulated. The driver was to use reasonable precautions not to frighten horses, and was required to stop on signal from any person in charge of a horse or horses.

It is thus apparent that restriction of the liberties of the public in the use of the highways is by no means a wholly modern development. The traveller has not always been free to use the highways as he pleases, nor is he now free to do so.

Regulations must, of course, change to suit the needs and convenience of the predominant user. While formerly the drivers of horse-drawn vehicles demanded severe limitations on the operations of motor vehicles, the widening of ownership of motor vehicles has turned public sentiment completely around and speed and priority are claimed as a right for them on the highways.

If regulation of vehicular traffic was deemed necessary in pre-motor days, or in the days when the motor car was just coming into use, it is manifestly much more essential now. Unlike traffic by railway, water or air, modern highway traffic affects the public throughout its entire length, both in respect of hazards and convenience and in respect of tax imposts on abutting or adjacent

¹S.O. 1868, c. 30, s. 45.

²S.O. 1903, c. 27.

property. Supervision of the standards of equipment, service, hours, conditions of labour and the details of the operating methods of those making use of the highways for commercial purposes has become a duty devolving upon the public authority. Should there arise a trend towards the development of a quasi-monopoly there will be introduced a further need of rate regulation, since the concentration of traffic in the hands of a few large operators would bring manifest dangers of discrimination and unfairness.³

Testimony before the Commission indicated to no uncertain extent the need of some measure of regulation in the motor transport industry in Ontario. It is not too much to say that as result of the severe and unrestricted competition that developed by 1933 the industry was thrown into a state of complete chaos. No better depiction of this sorry state of affairs has been made than that contained in a brief bearing date October 25, 1934, filed by the Automotive Transport Association of Ontario with the Minister of Highways wherein the conditions existing were described as follows:

"The condition of the motor transport business in Ontario is anything but healthy at the present time. The virtue which motor transportation has of requiring a relatively small investment per unit becomes with lack of proper regulations, a vice. Too many people go into the truck business for hire. Cut-throat competition follows, rates are slashed far below the cost of service, some operators work their drivers beyond legal limit of hours and others are compelled to follow suit or lose business; equipment deteriorates to the accident point, and proper depreciation is not provided for, with the result, ultimately, that the public get poor service; the operators go into bankruptcy; the employees are inadequately paid; the railways are confronted with unfair competition; regrettable accidents happen, and everyone concerned suffers. The bankrupt operator emerges from bankruptcy only to go into business again, or someone else takes his place, making a small down payment on new equipment, and goes through the same demoralizing process again. This cut-throat competition has demoralized motor transport in Ontario and now truckers and shippers alike are demanding that something be done at once to correct these evils."

Mr. Pape, testifying as secretary of the Automotive Transport Association, admitted that the conditions described as obtaining in 1934 still existed, with the exception that there are not now so many persons going into the business.⁴

However much one may be constitutionally opposed to regulating anything that can regulate itself, it stands proven that the motor transport industry has not been able of itself to remedy the unfortunate conditions that have crept in. Obviously, some further measure of control involving an application of the power of the state must be set up.

11.2—General Principles to be Observed. *No Undue Restriction or Stimulation.* In the framing of regulations for the control of commercial motor vehicles there must be full recognition of the fact that the utilization of such equipment in transport constitutes an asset of vast importance to the country. For many purposes the motor truck has shown undoubted superiority over other transport agencies. Its relatively small capacity, speed and flexibility have conferred upon it a conspicuous advantage for movements within some determinate range where promptness and low cost for small shipments are essential. In a similar way, and for parallel reasons, the interurban bus has to all intents and purposes completely superseded the electric railway.

Nothing should be done to prevent development of motor transport within the limits of sound economics. If, all proper charges having been met, the movement of goods or passengers by motor vehicle can be carried out at a lower

³Swanson—Road, Rail and River, 1937, p. 92.

⁴Evidence, p. 8297.

cost than would attend the movement by other means, then it is in the public interest that the operation should be entrusted to motor transport. The Commission accepts the view that the power of the state should not be used to impose extra taxation purely for the benefit of one industry as against another. Neither should an industry be stimulated by a higher degree of subsidization than is accorded competing industries.

No dissent from this view was expressed either in evidence or in argument. Those who asked for changes in the existing order merely asked that motor transport bear its fair share of the highway costs and be not in effect subsidized by the taxpayers or by the users of passenger motor cars.

No Over-Regulation. There should be no over-regulation. As long as the principle of private operation is accepted, the right of initiative and the privilege of making a profit on legitimate operations should be conserved if transport, or any other, business is to thrive. The duty of the controlling authority should be confined to insurance of the dependability of service, protection of the public against extortionate charges, discrimination and unfair and ruinous competition, the exploitation of labour, dangerous equipment, hazardous operating practices and the protection of the licensed operators in their legitimate interests.

Motor Transport Characteristics Must be Recognized. Regulations, if they are to be helpful, must fully recognize the peculiar and special characteristics of the motor transport industry. The demands for speedy handling of goods and passengers, the practicability of small scale operations, the nature of equipment and the personnel necessary to operate successfully must be fully borne in mind. As in any other business, managerial skill is required in order that the industry may pay its way and yield a fair return to its proprietors.

While full acknowledgement of the value to the Province of many small operations is due, there must be no ignoring the fact that the requirement of rapid and regular movement of large tonnages of goods can only be met successfully over a term of years by operators who are thoroughly sound financially and have a well grounded knowledge of the principles of the business.

Basic Regulations Should be Applicable to All Commercial Vehicles. It is obvious that the hazards to which the public is exposed through long working hours of truck drivers and through faulty equipment are attached to private commercial vehicles as well as to public commercial vehicles. Certain basic regulations should consequently apply to both. Wage scales might with reason be varied in accordance with the size or location of the community concerned, but the same cannot be said of anything that affects the public security either in the matter of life or property.

Regulations Should Be Strictly Enforced. Not only in the interest of the public but also in the interest of the enforcing authority itself, such regulations as exist at the moment should be strictly enforced at all times. While the waiving of a regulation under special circumstances and for just cause may be made publicly without untoward effects, the ignoring of the regulation is entirely a different matter. Charges of unfairness and discrimination are likely to arise and no regulating authority should place itself in the position of being exposed to them. Moreover, the ignoring of regulations in effect penalizes the careful observer of the law to the advantage of the non-observer, thus creating an unfair basis of competition.

Cost of Enforcement Should Not Be Excessive. Manifestly, regulations can only be practicable if it is possible to enforce them at a moderate cost. Moreover, complicated rules and procedures defeat their own end through the slowness with which they can be brought into operation.

SECTION 2—PRESENT REGULATIONS

11.3—Commercial Vehicles. The fundamental legislation respecting the operation of both commercial and non-commercial motor vehicles is contained in the Highway Traffic Act which deals with, amongst other things, matters of registration, licences, permits, equipment, weight, speed, safety precautions and rules of the road.⁵

Under the existing law there is no difference in speed prescribed for commercial and non-commercial motor vehicles.

11.4—Public Commercial Vehicles. Legislation specially applicable to public commercial vehicles, that is vehicles engaged in the haulage of goods for hire, is contained in the Commercial Vehicle Act.⁶

Under this Act, authority is given to the Lieutenant-Governor in Council, upon the recommendation of the Minister of Highways, to make regulations on a variety of matters. Action has been taken with respect to some of them in Regulations Respecting the Licensing of Public Commercial Vehicles, dated February 22, 1936.

Although under Section 8 of the Act the Lieutenant-Governor in Council possesses the power to make regulations concerning the publication, filing and posting of tariffs of tolls and the payment of tolls prescribed, the method of bookkeeping or accounting to be used and the returns or statements to be filed, and the minimum rates of pay or wages for drivers, no such regulations have in fact been promulgated. The enforcing authorities have consequently no power to take action in respect of any such matters.

11.5—Public Vehicles. Supplemental to the generally applicable legislation of the Highway Traffic Act, is the law concerning public vehicles, that is, buses operating for hire, as contained in the Public Vehicle Act.⁷ Buses not for hire are regarded merely as commercial motor vehicles, for which the applicable regulations are contained in the Highway Traffic Act.

In amplification of the Public Vehicle Act, there are Regulations Respecting the Licensing of Public Vehicles, dated March 14, 1936. Under the Act and the amplifying regulations the Department of Highways approves of licensing, tolls, routes, timetables, equipment and related matters for public vehicles.

11.6—Private Commercial Vehicles. In accordance with the definition contained in Section 2(g) of the Commercial Vehicle Act, a private commercial vehicle is one having a registered gross weight of six thousand pounds or more and operating regularly in the ordinary and usual course of the business of the owner beyond the limits of any urban zone, but does not include a commercial motor vehicle or trailer customarily used for the transportation from a farm or forest of goods which are the product of such farm or forest and incidentally used for the transportation of other goods, wares or merchandise, the property of the owner of such farm or forest.

Throughout the proceedings of the Commission the term "private commercial vehicle" was, for convenience and in accordance with logic, employed to designate a commercial vehicle of any gross weight not operating for hire.

⁵R.S.O. 1937, c. 288.

⁶R.S.O. 1937, c. 290.

⁷R.S.O., 1937, c. 289.

It is believed that this wider interpretation of the term is desirable and such is employed in this report.

Criticism was voiced in evidence of the lack of crucial regulations pertaining to commercial motor vehicles not for hire. Such provisions as are contained in Section 6 of the Act relate only to licensing, and the powers granted to the Lieutenant-Governor in Council to extend to private commercial vehicles the regulations now applicable to public commercial vehicles have never been exercised. Many witnesses expressed the view that any regulation that might be established respecting hours, wages and safety of operations on the highway should be applicable to private commercial vehicles as well as to those operating for hire. In this the Commission concurs, subject, at least for the present, to the exclusion of private commercial vehicles not exceeding 6000 pounds in gross weight from any regulations respecting hours and wages. Further reference is made to the matter in Arts. 11.11 and 11.12.

SECTION 3—CRITICISM OF PRESENT REGULATIONS AND CHANGES RECOMMENDED FOR THEIR IMPROVEMENT

11.7—General. While many criticisms of the regulations, and some of their enforcement, were expressed in evidence or in written submissions, the comments received were by no means all unfavourable. In respect of many of them only commendation was heard.

No complaint was received concerning the regulations governing public vehicles, that is buses operating for hire. Such representations as are here reported will therefore refer only to motor truck operations.

As has already been intimated in Art. 11.6, vigorous objections were expressed to the Commission respecting the immunity of private commercial vehicles from important regulations now applicable to public commercial vehicles, particularly those relating to working hours for drivers. These representations were received not only from Mr. Fabian, representing the Automotive Transport Section of the Canadian Brotherhood of Railway Employees, but also from numbers of operators of public commercial vehicles. Moreover, it was pointed out that such regulations as may in future be instituted for public commercial vehicles respecting hours, wages, safety or related matters should apply equally to private commercial vehicles. Should this not be the case, the operators of public commercial vehicles would be at a disadvantage in seeking business. Even as it is now, the rule limiting drivers to ten hours in any twenty-four was stated to operate as a discrimination between the two classes of vehicles.

As a result of close study of the submissions, the Commission is of the opinion that certain changes in the regulations are required in addition to those recommended in Chapter VII in connection with licensing. It is fully evident that the motor transport industry cannot of itself hope to cure the ills with which it is beset. Further regulation is necessary, and whether this can be brought about by amendments to the Highway Traffic Act, the Commercial Vehicle Act, the Minimum Wage Act or the Industrial Standards Act, or whether entirely new legislation will be required is immaterial to the present inquiry. Large powers to frame and promulgate regulations were conferred under the Commercial Vehicle Act, and were such powers exercised it is likely that many of the troubles of the industry would be overcome.

Any fundamental regulations that now exist or that may be established in future, for example, those affecting hours, wages and safety, should be applic-

able to private commercial vehicles as well as to those operating for hire. The matter of differentiation in the amount of the licence fee to take account of difference in granted privileges is discussed in Chapter VII.

11.8—Regulation of Rates. *The Existing Chaos.* Witnesses appearing before the Commission were in unanimous agreement that a state of chaos exists in the motor trucking industry as a result of severe competition in rates and an equally unanimous view was expressed that something should be done to bring a measure of order out of the desperate situation that has arisen. Low rates inevitably mean low wages, long hours, starved, inefficient and dangerous equipment, losses to the operator, final bankruptcy and disruption of a service on which the public has come to rely.

The extraordinary disorganization that exists in the freight rate structure has been fully outlined in Chapter X and need not be further reviewed here.

No particular quarrel appears to exist amongst the operators of motor buses or with other forms of passenger transport, so far as fares are concerned. The tariff difficulty arises almost wholly in connection with the transportation of goods.

There was no desire expressed by operators or their representatives to prevent whatever degree of competition might be salutary in normal business operations. Shippers, such as Mr. La Ferle, of The Robert Simpson Co., Ltd., who might off-hand be expected to favour particularly keen competition, did not look with equanimity on competition of the cut-throat variety.⁸

Some Compulsion Necessary. In the many representations that were made before the Commission it was generally agreed that the complexities and importance of modern commercial motor transport rendered some measure of Government control necessary. Such differences of opinion as arose related to the measures by which it might be brought about and the desirable degree of such regulation. There was general concurrence in the view that the operators cannot expect to conclude and observe a firm agreement without some enforcing authority.

Repeated efforts have been made by groups of operators, for example, in the Lake Huron-Georgian Bay area, to establish a reasonable rate structure, but, as pointed out by Mr. Clarke, the effort came to nought through the lack of any power of enforcement.⁹ Mr. Marks had to abandon the idea of quoting rates in accordance with the cost of doing business since there was no power to compel the transport operators to "stick together."¹⁰ Mr. Teakle, speaking for Martin Transports, Ltd., considered that a penalty was essential to insure adherence to any agreed rate structure. He expressed the view that what was needed was "a little punch injected into the industry."¹¹ Mr. Male, on behalf of Inter-city Forwarders, Ltd., was emphatic in stating that policing of rates was essential. Mr. Caldwell, for Canadian Cannery, Ltd., stated that his company would welcome any regulation of rates that is reasonably possible. Mr. Kinnear, for National Grocers, Ltd., saw no objection to the fixing of rates for all users of transport, provided everybody is on the same basis. Even Mr. Drury, whose inherent antipathy to regulations is well known, admitted that if a measure of monopoly in haulage were created, regulation would be necessary.¹²

⁸Evidence, p. 6182A.

⁹Evidence, p. 2127.

¹⁰Evidence, p. 2353.

¹¹Evidence, pp. 3448, 3636.

¹²Evidence, p. 6830.

Character of the Necessary Regulation. A prerequisite of any system of control of rates would be the establishment of a rational freight classification. This could only be done satisfactorily by the operators themselves, possibly in conjunction with the regulating authority, but when adopted should govern the operation of all carriers unless individually exempted by the regulating authority for satisfactory reasons. Without a clear definition of the principal classes of freight to be handled no satisfactory schedule of rates is possible.

There was general agreement respecting the wisdom of requiring operators to file their rates with the regulating authority. This might be brought about by an exercise of the power granted to the Lieutenant-Governor in Council by Section 8 of the Commercial Vehicle Act, to make regulations concerning the publication, filing and posting of tariffs of tolls and the payment of tolls. The filing should, in the opinion of the Commission, be with a regulating authority designated by the Government. Not only were the operators generally favourable to this step but, speaking for The T. Eaton Co., Ltd., Mr. Hiscox urged that the publication of rates would be of great value to the shipper, since he would then know how to make proper quotations of prices. The resulting effect would be a benefit to everyone.¹³

While there was general agreement that the regulating authority, if it were to have any disciplinary effect, must have the power to disallow for just cause any rate filed with it, numbers of witnesses contended that, on the ground that all price fixing is essentially unsound, the power of fixing a rate should be withheld.

On the other hand, the view was expressed by a considerable number of witnesses that the regulating authority should have the power under certain circumstances to fix rates as well as to disallow. Mr. Martin would permit fixing as a last resort.¹⁴ Mr. Sylvester favoured the fixing of all rates.¹⁵ Mr. Goodale agreed essentially with Mr. Martin. Mr. Thorpe favoured the conferring of powers upon the regulating Board similar to those possessed by the Board of Transport Commissioners for Canada.¹⁶ Mr. Rodanz believed that it was necessary that the Board should have power to disallow rates and if necessary to fix them.¹⁷

It is the unanimous opinion of the Commission that without the power to fix as a last resort, smooth and expeditious rate regulation would be seriously hampered, to say the least.

The Commission concurs in the view, generally expressed in testimony, that the regulating authority should not proceed of itself to draw up complete schedules of rates. The industry is better able to do this in the first instance and should be asked to prepare and submit rates that it believes to be fair.

11.9—A Transport Board. General. In the unanimous opinion of the Commission any regulation capable of remedying the ills now besetting the motor transport industry can only be carried out through the agency of a regulating board clothed with powers and authority to deal fully and completely with the problem in its varied and complex forms.

A definite suggestion in this regard was made by the Automotive Transport Association.¹⁸ That organization advocated the setting up of a Transport Board

¹³Evidence, p. 5566.

¹⁴Evidence, p. 4297.

¹⁵Evidence, p. 4395.

¹⁶Evidence, p. 6326.

¹⁷Evidence, p. 8559A.

¹⁸Brief, February 23, 1938, p. 19.

consisting of three members appointed under conditions insuring permanence in office during good conduct and empowered to hear evidence on oath and to deal with matters relating to licences, tariffs, tolls and other details of the motor transport business.

As a result of careful consideration of this and other suggestions that have been made, the Commission is of the opinion that a special Board should be appointed with requisite powers to deal adequately with the situation. Such a Board might either be an entirely new body or, on the other hand, a section or division of the Ontario Municipal Board specifically charged with duties pertaining to the regulation of transport in the Province. Due to the extent and complexity of the duties that would naturally arise in the administration of all commercial motor transport in Ontario, it would appear essential in the latter alternative to appoint additional persons to the Municipal Board and to segregate transport activities from the already onerous duties of the Board and assign them to a Transport Division.

Whether a Board be set up in the one way or in the other, the conditions of appointment and service should be such that the members of it could act with independence and security. The motor transport industry in Ontario is now in the class of big business and the issues to be faced by any regulating Board will be so important and at times so difficult that no Board should be in the position of being impelled to withhold what might be temporarily an unpopular decision.

For the sake of convenience of reference, the regulating authority, whether it be set up in one of the ways mentioned or the other, will be here designated as the Transport Board, or merely the Board.

Composition and Conditions of Service. It is suggested that the Board consist of three members. The first of these, preferably chosen from the legal profession, should be familiar with the applicable law, should have had considerable experience as a member of deliberative bodies and some acquaintance with the transportation of goods and passengers by motor vehicle. He should be Chairman of the Board.

The second member should be one who for some years has been engaged in the automotive transport business and who has a thorough understanding of its needs.

The third member should be a University graduate in engineering of some years' standing with experience in dealing with problems relating to transport.

The members of the Board should be appointed for a period of ten years irrespective of political allegiance and, during good behaviour, should be removable only for cause by the Legislature. They should cease to hold office upon attaining the age of seventy years. Their remuneration, which should be in keeping with the high importance of the onerous services demanded of them, should be fixed by the Legislature and they should devote the whole of their time to the performance of the duties associated with the Board, unless in the public interest some other arrangement might be found desirable.

Powers, Duties and Jurisdiction. The duties of the members of the Board should generally be to administer the law of Ontario governing the transportation of goods and passengers by motor vehicle and more particularly the discharge of such duties as may be assigned to the Board by the Act creating it.

The Commission is of the opinion that generally the powers, duties and jurisdiction with reference to transportation by trucks and buses in Ontario

should be similar to those of the present Board of Transport Commissioners for Canada.

It is recommended that the Board should have the power to deal, and be charged with the duty of dealing, with the following matters, amongst others:

(1) To hear applications for the issue, renewal and transfer of licences to public commercial vehicle operators and public vehicle operators.

(2) On complaint, to suspend or cancel licences of the above-mentioned classes of vehicles for infractions of the regulations.

(3) To establish reasonable hours of labour and rates of pay for employees engaged in the transportation of goods for gain or not for gain and the transportation of passengers for gain by motor vehicle.

(4) To provide for inspection of the mechanical condition of motor vehicles of the classes mentioned.

(5) To provide for the medical inspection of drivers and for the examinations or tests of driving ability and knowledge of the equipment employed.

(6) To require the motor trucking industry within a prescribed time to set up and file with the Board a classification for goods transported by public commercial vehicles and tariffs of rates to govern individual operators or groups of operators.

(7) To issue orders and regulations governing the filing, posting, publishing, availability and supersession of tariffs and tolls and to arrange and supervise the enforcement thereof.

(8) On complaint, to disallow in whole or in part any tariff or rate for cause and if necessary to fix a rate in lieu of any one disallowed.

(9) To appoint inspectors to ascertain whether the statutes and regulations administered by the Board are being observed and to enforce observance of such statutes and regulations.

(10) To arrange with the Department of the Attorney-General for such policing of the highways as is performed by the provincial police.

(11) To make regulations designed to prevent discrimination, secret rebates or other unfair practices in connection with tariffs to be issued by the operators.

The Commission is of the opinion that the proceedings before the Transport Board should be public and conducted only after proper notice has been given to all persons affected. When necessary evidence should be taken on oath. In cases involving the issue, transfer or cancellation of licences, where the annual net value of the privilege is in excess of a prescribed amount, an appeal should be allowed from the decision of the Board to the Court of Appeal for Ontario.

Rate Regulation by the Board. Once the classification and the various tariffs of rates were filed with the Board they would, until superseded or modified, be the classification and rates under which the operators would carry on business. No operator should be allowed to undertake haulage of any commodity at all unless within the time so fixed or extended he had filed with the Board the tariff of rates under which he proposes to operate.

Much consideration was given in the public hearings to the advisability, or otherwise, of permitting a regulatory Board to fix a rate, if such action should be found desirable. It is the opinion of the Commission that without the right to fix a rate or the classification to be used as a last resort the operations of

the Board and the speedy solution of difficult rate problems might be greatly hampered. If the Board is to be in a position to disallow a rate it must ascertain what constitutes a fair rate. Some definite standard or yardstick by which the acceptability of the filed rate should be judged must be set up. Having determined what constitutes a fair rate it would, in the opinion of the Commission, be in the public interest to communicate the information so obtained to those concerned and to make perfectly clear that the Board could not approve of any rate which was lower or higher than the fair one. Such action is tantamount to fixing.

Although many references were made in evidence to the power of fixing rates residing in the Board of Transport Commissioners for Canada, there were no allegations whatever that the power had ever been misused or that it was not exercised to the general advantage of the country. Neither were there any suggestions that the power of the Department of Highways to revise and so to prescribe tariffs of tolls for public vehicles (buses) had been used other than wisely.¹⁹

For the reasons above set forth the Commission believes that the rights enjoyed by the Board of Transport Commissioners for Canada in this regard under Section 325 of the Railway Act of Canada should, the necessary changes being made, be conferred upon the Transport Board.

It is not within the scope of the Commission to define the principles in accordance with which the Board might determine either the unfairness of a rate or the applicability of it. It may be sufficient to observe that the most practical definition of an unfair rate under present circumstances appears to be that it is one that tends to bring the operator's revenue below his cost of doing business. It is neither in the interests of the operator himself nor of the public to permit the continuance of business on such a basis.

The power to enact is futile without the power to enforce. It is therefore recommended that the Board have the power to enforce its decisions, orders and findings by means of fines, and/or imprisonment, suspension, or cancellation of licences and privileges, as the case may be.

The Commission further recommends that the Board be given the additional power of dealing with contraventions in respect of tolls filed or established in due course by the Board, substantially the same as those presently exercised by the Board of Transport Commissioners for Canada, as found in Sections 425 and 430 of the Railway Act, and the further powers with reference to false billing and unjust discrimination, similar to those conferred in Sections 427 and 429, respectively, of that Act.

The Commission further recommends that the Board should have powers similar to those of the Board of Transport Commissioners for Canada to cover cases of disobedience to its orders.

Careful consideration of the evidence and argument relating to the proposal of the Automotive Transportation Association of Ontario to set up a Road Transport Association within the industry²⁰ leads the Commission to the view that no recommendation should be made in this respect. So far as the public is concerned, it does not matter what particular internal arrangement may be set up within the motor transport industry to obtain concerted action or the steps that may be taken to bring the views of the industry before the Transport Board. In any event the Commission cannot recommend that all operators

¹⁹R.S.O. 1937, c. 289, s. 6.

²⁰Brief, February 23, 1938, p. 20.

of motor vehicles engaged in freight haulage for hire should be forced to join an association within the industry, under penalty of being debarred from doing business.

On the other hand the Commission regards favourably a suggestion of Mr. J. A. Argo, Chief of the Tariff Bureau of the Freight Department, Canadian National Railways, that the transports should handle classification through a common agent to which all truckers would give reference.²¹ As has been stated, the Commission regards a common freight classification for motor transports as most essential to the reduction of the present chaos. It is reasonable to believe that any classification recommended by a majority of the transport interests would receive maximum consideration by the Transport Board, as would recommended changes in classification emanating from any such majority group.

11.10—Hours of Labour Under Existing Regulations. Sections 18 and 18a of the Regulations Respecting the Licensing of Public Commercial Vehicles, approved by Order-in-Council, 22nd February, 1936, contain the only stipulations in effect respecting working hours of those engaged in motor transport. They are:

18. Except as provided in paragraph 18a of these Regulations no person owning, controlling or managing any Public Commercial Vehicle shall drive or permit or require anyone to drive a motor vehicle for more than a maximum of ten hours in any twenty-four hour period, nor shall any person after having been employed in any other capacity drive a Public Commercial Vehicle, if by so doing the total period of employment or work in the capacity of driver, or otherwise, exceeds ten hours in any twenty-four hour period.

Time occupied riding or being upon a Public Commercial Vehicle in the capacity of helper, relief driver or otherwise, shall for the purpose of this Regulation be considered the same as driving time.

- 18a. The Department may grant special written permission extending the permissible period of driving providing application for such permission is made in writing and in advance of date required when in the opinion of the Department there are circumstances which justify such an extension.

As was pointed out in detail in Chapter VI, motor truck operators have frequently required or permitted their drivers to remain on duty for periods in excess of ten hours in twenty-four. In some instances this has been done under the cloak of Section 18 of the Regulations. While some witnesses regarded the rule as designed to prevent drivers from working over ten hours in any twenty-four, either at driving exclusively or at driving part of the time and performing some other duty, such as loading, unloading, billing or truck washing, for the remainder of the time, whether the driving came first or last, others placed an entirely different interpretation upon it and conducted their operations in accordance with that interpretation. This was that while a driver was not permitted to work on other employment than driving and then be employed at driving on the highway for an aggregate duty period of over ten hours in twenty-four, he might be allowed to drive on the highway first and then work on the platform or at driving in the city for a total of over ten hours.²² For example, he might drive for eight hours and then work for four or five hours in the warehouse. Manifestly, the intention of the regulation ought to be clarified in the next revision.

The restriction of driving hours to ten in twenty-four was held by Mr. Morgan to be unwise for those drivers who are engaged on long-distance

²¹Evidence, p. 318.

²²Evidence, p. 5016.

scheduled service.²³ Under the rule, a man who had finished a ten-hour drive from his home terminal would be required to remain off duty for fourteen hours. He would not likely sleep more than eight hours of this time, after which he would be compelled to remain idle for another six hours, with the result that he might dissipate his energies to the extent that on resumption of the homeward trip he would be much less fit to drive than if he had immediately started back on completion of a full eight-hour rest. Moreover, he would much prefer to spend the additional six hours at home with his family.

Strong objection has been taken to Section 18 by the proponents of sleeper cabs, particularly by Class "H" licence holders, that is household furniture movers. Mr. May, for the Ontario Movers' Association, pointed out the great utility of the motor truck in the long distance household furniture movement, and the service rendered in moving household goods from a home in one city to a new home in another city, possibly five hundred or a thousand miles or more away. Under the circumstances, the movers are urged to get the shipment to the new home as fast as possible in order to avoid large hotel bills for the family moved. Since no two successive trips by Class "H" operators are likely to be to the same points, the setting up of division points or relief posts is impracticable. It was further held to be impracticable to obtain trustworthy guards for the truck and load in strange towns passed through, so as to permit the drivers to leave the truck and go to an hotel for rest. To remedy the situation, it was urged that the use of a properly equipped sleeper cab permitting one of the two drivers to sleep while the other drove, was the logical solution. The regulation as it now stands renders the use of such illegal, even if the truck be parked.²⁴ The recommendations of the Commission in this regard are to be found in Art. 11.11.

While no objection was made to the granting under Section 18a of the Regulations of special permission to extend the permissible period of driving under exceptional circumstances, it was pointed out that since the emergency conditions would generally arise without warning, and perhaps at night, the application for, and necessary receipt of, written permission is impracticable. Numbers of operators reported that the practice was to proceed on the trip and notify the authorities by telephone as soon as possible. It appeared from the evidence that written permission has rarely been given and that the usual practice is to overlook neglect to obtain the required consent in writing.²⁵

11.11—Maximum Permissible Hours of Labour. General. It should be axiomatic that the hours of work per day or per week demanded of motor transport employees should be based not on what may appear to be necessary in order to meet competition, but rather on what in the long-run interests of the workers appears to be a reasonable task. While hours should be long enough to be commercially practicable, at the same time they should not be so long as to produce excessive fatigue. It may be taken for granted that if both working hours and wages are fair the employer will enjoy the advantage of being able to secure particularly desirable men.

Several criteria affect the suitability, or otherwise, of any schedule or working hours. These have to do with the hours worked per day, the continuity of these hours, necessary rest periods between tours of duty, the hours worked per week and provisions for days off.

²³Evidence, p. 3825.

²⁴Brief, Ontario Movers' Association, p. 9.

²⁵Evidence, p. 1192.

Hours Worked Per Day. It is manifest from the evidence that a duty period of ten hours per day is widely regarded as not too long for motor transport operations generally. Although in certain instances the eight-hour day is in satisfactory operation, the Commission believes that in the present development of the industry it is not generally practicable. So drastic a reduction as this from the customary working hours of motor trucking employees will have to come slowly.

It was urged by all witnesses, and with propriety, that some leeway over the set normal period of work should be permitted, in order to allow for unavoidable delays or emergencies. For example, a trip that under usual conditions could readily be made in eight or nine hours, might, due to tire failure or mechanical breakdown, unusual weather conditions, or other delay beyond the control of the driver, require eleven or twelve hours for completion. To compel the driver to lay up his truck at the end of ten hours would demoralize operations, and constitute a particular hardship on the driver anxious to get home or to his normal place of rest as quickly as possible.

While every witness was willing to admit that protracted hours repeated daily were unduly fatiguing on a driver, and a menace to public safety, there was no evidence suggesting, and considerable to the contrary, that an occasional period of twelve or even fifteen hours in the event of uncontrollable circumstances is a menace to health or public safety. The great majority of witnesses accepted the principle of a basic ten hours of driving time or other work per day, with an allowable twelve hours on any one day, provided the total of sixty hours per week was not exceeded.

The extraordinary pressure on trucking facilities during the peak of the fruit and canning season makes it desirable in the general interest to permit some latitude at that time in the matter of working hours. Abnormal seasonal peaks may occur in other industries and may warrant similar action being taken in respect of them. The Commission believes that necessary relief might be given through permitting the usually prescribed working hours to be exceeded by twenty per cent for periods totalling not more than three weeks in any one year.

Continuity of Duty. Although no driver should be expected to remain continuously at the wheel for more than a few hours, any risk in this regard appears to be automatically regulated. There was no evidence before the Commission to indicate any necessity or desire on the part of either driver or employer, to specify any maximum duration of continuous driving. It appeared to be accepted by all, as both usual and proper practice, that a driver would take occasional breathing spells from driving as the fancy suited him, to eat his lunch or stretch his legs. The driver of a vehicle is away from authority and any rule for or against such practice could not be enforced.

That a driver should be wholly immune from the orders of his employer, and free from all responsibility during rest periods is desirable. At the same time, the arbitrary enactment of such a regulation would completely prohibit the long distance moving of household furniture, for which the truck is peculiarly adapted, as well as the carriage of similar loads for which quick transit and continuity of individual responsibility are the controlling factors.

Useful information concerning the length of consecutive periods of driving, broken in the customary manner mentioned above, may be obtained from the report of the United States Federal Co-ordinator of Transportation on Hours, Wages, Working Conditions in the Intercity Motor Transport Industries, 1936.²⁶

²⁶Part II—Motor Truck Transportation, p. 80.

As a result of a study of the performance of 2959 regular full-time truck drivers it was found that in 22.7 per cent of the cases men were engaged for from four to six hours of consecutive driving and for 10.2 per cent of the cases from six to eight hours.

As has been pointed out in Chapter VI, there was general admission of the necessity of protecting the driver from the badly-split day. For example, five hours on duty with seven hours off repeated indefinitely is not conducive to the driver's health and stamina or the safety of the public on the highways. To the end that such practice may be discouraged it is desirable to frame regulations so as to encourage, if not to force, the concentration of the working hours within a somewhat limited spread.

Rest Between Duty Periods. The desirable length of intermission between any two consecutive periods of duty will increase with the length of such periods. For a full day's work it should be sufficient to provide for the equivalent of a full night's rest or, allowing for eight hours of sleep, it should not be less than nine hours.

Use of Sleeper Cabs. The Commission is not favourably disposed to the general introduction of sleeper cabs in Ontario. The principle on which the common carrier licence system of the Province has developed has been that each licensed carrier is localized to serve one particular route or territory. No evidence suggested that this general principle should be altered. The Commission does not believe that the position of the operators would be benefited, or the public better served, by the development of a host of tramp freighters, and it is not prepared to endorse the use of sleeper cabs except in the most restricted circumstances, such as that of long distance moving and the movement of special, exclusive and valuable and/or perishable express freight.

Should tramp trucks be permitted to have scope in Ontario, the question of trucks licensed in other jurisdictions and operating in this Province would also need to be considered.

Repeated evidence was given before the Commission to the effect that in the operation of heavy tractors and semi-trailers, and particularly with a second trailer, which is the only type of movement that would normally justify a two-man crew, the need of the second man was not only to take turns in driving, but also to be available to block the wheels in the event of stalling on a hill, or, in other emergency, or to guard the vehicle so that in case of a breakdown the driver might leave the vehicle to seek aid. In the light of such evidence the Commission cannot believe that a second driver resting in a sleeper cab would not be available or likely to be called for duty at any moment by reason, or on pretext, of special emergency.

The Commission believes that logical development of long-distance hauling in the motor transport industry would be the establishment of zones in which one or more licensees would have the right to supply tractors and drivers on some scale of fees for the hauling of all semi-trailers seeking passage through the zone. With such an arrangement, particularly if the cargo were of special value, the semi-trailer would be accompanied throughout its trip by a guard or messenger of its owner company.

Further reference to the sleeper cab as a piece of automotive equipment is made in Art. 11.14.

Length of Working Week. Although some witnesses urged that in the busy harvesting season, particularly the period of fruit and canning operations, seventy-five hours per week for truck drivers was a reasonable and proper

task, on the other hand, certain witnesses urged the general adoption of a forty-eight hour week. These were relatively few, however, and it may be said that there was fairly general acceptance of the sixty-hour week as reasonable. During the peak season this might be increased by twenty per cent., as has already been suggested in the matter of the length of the working day.

Days Off. It is not in the interests of the public to permit men to work for a series of weeks without days off, as has been reported in Chapter VI. Except in cases of emergency, men should be permitted to have one day off in seven. Due to the prohibition of Sunday trucking, except in the haulage of perishable freight, the six-day week is generally observed and with the limitation to sixty hours under normal conditions the trend will doubtless be to discourage still further the seven-day week. Except in the case of the canning industry, there was no request made or suggestion given that the trucking industry desired to operate seven days a week.

Suggested Working Hours. For the guidance of those who may be charged with the framing of revised regulations respecting the working hours of drivers of commercial motor vehicles on interurban or highway service, the Commission would suggest for consideration the following:

1. A driver is at work when he is engaged in loading, driving, unloading, handling freight, preparing reports, preparing vehicles for use, or performing any other active service pertaining to the transportation of passengers or property.
2. A driver is on duty from the time he begins to work or is required to be in readiness to work until he is relieved from work and from all responsibility for performing work.
3. A driver shall be paid for all time at work or on duty irrespective of the type of work that he is called upon to perform.
4. Time worked or on duty shall be included within a period of fifteen hours in any and each twenty-four consecutive hours and shall be made up of not more than two periods, each of not less than three hours' duration. Release from work or duty for a period of three hours or less shall not be deemed to be a release for purposes of pay, except in one instance daily, and then only to the extent of one hour, or the actual duration of the period of release if less than one hour.
5. No interval between periods of duty shall be deemed to occur unless such interval is in excess of three hours, other than in the case of one interval of usual length for a meal. Unless a driver is completely free of all responsibility for his truck or load at meal time, he shall be deemed to be on duty during that period.
6. (a) No driver shall work or be on duty more than ten hours in any consecutive twenty-four hours except as follows:
 - (b) The period of ten hours may be increased to twelve hours when on account of flood, storm, fog, ice, accident, unexpected delay or other abnormal condition such longer time is necessary to complete a run that would, except for such abnormal condition, have been completed within his ten-hour period of duty.
 - (c) Where a driver at the expiry of any ten hours (or under abnormal circumstances twelve hours) of work or duty has reached his scheduled destination (not being his home base) he may resume work or duty, and leave for his home base within nine hours, if during such nine hours he has obtained the equivalent of a normal night's rest.
 - (d) On special, occasional and unscheduled turn-around, round trips, if, at the end of ten hours, or in unanticipated circumstances as set out in (b) above, at the end of twelve hours, the driver is within two hours normal run of his home base, he may continue to his home base provided that he shall not be called for duty, or report for duty, until the expiry of a period starting at the time of his arrival at his home base, equal to the elapsed time between his departure on such round trip and the time of his completion of it.

7. A driver having completed a period of duty of ten hours as in 6(a) above or twelve hours as permitted in 6(b) may not drive or perform any other duty before the expiration of nine hours.

8. No driver shall work or be on duty more than sixty hours in any week, counting from Sunday noon to Sunday noon, except that in any week of abnormal circumstances as set out in clause 6(b), additional hours not in excess of four may be spent at work or on duty.

9. No run or runs, except as in 6(d), may be scheduled or allocated to any driver to be completed in one day's work that cannot under average operating conditions be normally completed in nine hours running time.

10. Except in the circumstances set out in clauses 11(b) and 11(c), all time spent as a helper or alternate driver, or riding deadhead under the instructions of the motor vehicle owner, shall be classed as time on duty, whether such time be spent actually at work, riding as a passenger, or resting in a sleeper cab.

11. (a) Where special permission is given for the operation of sleeper cabs, a motor vehicle so equipped and manned with two drivers may continue in continuous operation in charge of the said drivers for thirty hours, when complete relief from duty for at least twelve hours must be given the drivers.

(b) Provided the motor vehicle is parked and at rest, the aforementioned drivers may occupy the sleeper cab and maintain oversight of the vehicle, without contravention of these regulations during their twelve hours relief from duty.

(c) Provided such motor vehicle is attended by three competent drivers, it may continue in operation continuously until the particular operation in hand is completed, but each of such drivers shall be deemed to be on duty not less than sixteen hours in any twenty-four hours, and each shall be in turn completely relieved of all responsibilities in connection with the operation for a period of eight hours in each twenty-four. Provided further that no driver shall work or be on duty in excess of sixty hours weekly, except with the express consent of the Department (or Board) and in accordance with its orders. (While the manning of a vehicle by three drivers was not suggested in evidence or in written submissions, it would appear to be a logical arrangement, if provision for special trips of, say, 2000 miles in length is to be made).

During occasions of peak business, totalling for any operator not more than three weeks in any one year, the daily and weekly hours above set out might be increased 20 per cent., but the operator should report to the appropriate regulating authority at least once a week, all occasions on which advantage had been taken of this permission, stating the names of the drivers or others working in excess of normal hours, and the reasons therefor.

Hours of City Drivers and Warehouse Workers. One of the most difficult situations to be disposed of satisfactorily is the matter of hours of employment of men engaged as warehouse workers and those working part time at driving and part time in the warehouse. As has been pointed out in Chapter VI, their hours of work have frequently been excessively long, due to the necessity of accepting deliveries in the late afternoon or at almost any time and making deliveries early the following morning or as quickly as possible.

It does not seem expedient to deprive the shipper of this class of service, or to prohibit the truck operator from providing it, by penalizing operations carried on after five or six o'clock in the afternoon. At the same time, one of the frequent sources of contention and difficulty in the industry is the wide spread during which city drivers are called upon to work. While the problem is a difficult one, it is by no means insoluble. Already one operator has reported that a satisfactory adjustment has been made through the staggering of hours. An exactly similar problem of fitting personnel to peak conditions of traffic has been solved by every city passenger transport service.

While a certain amount of tolerance must be allowed in the hours of highway drivers to take account of various lengths of trips, variations in climatic conditions and in the density of traffic, the hours of work of both city drivers

and warehousemen can be accurately scheduled. Although such work may not be characterized by so great a responsibility as that attaching to the work of the highway driver, it is more continuously labourious and the hours should preferably be fixed at somewhat less than sixty per week. The express companies and the railway freight departments operate on a basic forty-eight hour week. At the present time an eight hour day in a spread of twelve hours would appear to be satisfactory for motor transport.

No witness, representing either public or private commercial vehicles engaged in mercantile or industrial trades, questioned the propriety of regulating the hours of drivers of private vehicles in the same manner, and to the same degree, as those of public commercial vehicles. The view of Mr. Maloney, of the Canada Building Materials, Ltd., was typical: whatever hours were set by law, could and would be observed, provided their observance was universally enforced.

The greatest offenders in the matter of length of hours worked were the operators in rural areas, particularly, so far as direct evidence reached, those serving the canning industry.

In view of all the circumstances and also of the obvious difficulty of introducing effective control of the many light trucks used by industry and commerce for delivery and other purposes, the Commission would recommend that such regulations as may be introduced respecting hours and wages be not applicable initially to private commercial vehicles not exceeding 6,000 pounds in licensed gross weight. The situation respecting rural and primary product industries is specially considered in Art. 11.21.

11.12—Minimum Permissible Wages in Trucking Operations. *General.* As has been pointed out at length in Chapter VI, many criticisms of wage scales and the lack of regulations concerning them were received not only from Mr. Fabian but also from motor transport operators and others. Failure to exercise hitherto the power granted in the Commercial Vehicle Act, s. 8(h), to promulgate regulations concerning minimum rates of pay or wages was regretted.

In any attempt to determine what constitutes an adequate wage for any class of employee in motor trucking operations, it is necessary to consider the basis upon which wages in any calling are determined. There appears to be little justification for the view that the wage should depend upon the class or value of the goods handled. Rather should it depend on the degree of responsibility and skill required of the employee in conducting the operation with safety to the public. Manifestly, quite as much public responsibility rests on the driver of a truck carrying low-class freight along the highway as on one who carries goods of high value. The effect of long hours and trying climatic and traffic conditions will be just as likely to cause mishaps in the one case as in the other.

While it is desirable that any wage scale that might be instituted should not handicap the small trader or the small town operator in the conduct of his business it should in any event be sufficient to meet the proper cost of living of the employee.

Wage Levels in Other Forms of Transport. Attempts were made by witnesses to compare the relative demands on skill, endurance and dependability of drivers of commercial motor vehicles and employees in other forms of transport. Obviously the truck driver and the locomotive engineer occupy positions that are not closely comparable. Mr. Fabian expressed the view that the express

messenger constituted the nearest comparison with the motor truck driver.²⁷ Here again, the comparison is imperfect in that the express messenger has important clerical duties and assumes a considerable degree of financial responsibility, but has no driving responsibilities.

In the railway service, porters and truckers at stations perform duties in a measure comparable to those of motor truck employees and receive, on the basis of an adjusted 60-hour week, about \$30. Brakemen, passenger baggagemen, and baggage, parcel room and station attendants would, on the same basis, be paid approximately \$35. In the express service, vehiclemen would receive on an average about \$34 and vehicle helpers about \$29, for an adjusted 60-hour week. Express messengers on the same basis would receive from \$42 to \$49 per week.

In the marine service, including an allowance of one dollar per day for board, second mates and third engineers receive an average of \$26 per adjusted 60-hr. week, and the wheelmen and oilers about \$19.

In ground service connected with air transport, a crew chief or sub-foreman would receive about \$42 per week, an air engineer or aircraft mechanic about \$35, helpers to air engineers or aircraft mechanics about \$23, and chauffeurs, firemen and servicemen about the same.

Desirable Wages in Motor Transport. Many expressions of opinion were received from witnesses concerning what might be regarded as fair and reasonable wages, particularly for highway drivers and city drivers. In the general belief that a man should receive at least \$25 per week in a metropolitan centre in order to live and support his family properly, many witnesses expressed the view that the wages for city drivers should be not less than \$25 per week and those for highway drivers not less than \$30. While some difference of opinion was disclosed in the matter, the majority opinion appeared to be that somewhat greater demands on the driver's skill and endurance and a heavier responsibility were involved in highway driving than in driving in a city.

There are obvious difficulties involved in suggesting a minimum wage. Drivers residing in small centres frequently enjoy the advantages of a much lower cost of living than do those living in metropolitan centres and manifestly the wage level that might be suitable for one might not be suitable for the other. Moreover, the rural operator is in direct competition with the metropolitan operator.

During the last days of its public sittings, the Commission learned with much satisfaction of an agreement relating to hours, wages and working conditions having been executed between forty-one motor transport operators and their employees. The number has since been increased to fifty-six operators. On the basis of a 60-hour week the hourly rates prescribed in this agreement would yield for a highway driver in charge of a tractor and semi-trailer \$24 per week for the first six months and \$27 per week thereafter. Drivers of straight trucks receive \$24, and those having in train a four-wheel trailer, double hook-up or dolly receive \$30. City drivers and warehousemen in centres of 50,000 population receive \$21 for the first six months and \$24 thereafter.

In suggesting a minimum wage there is always the danger that interested persons may choose to regard it as also a maximum wage. Such would be most unfortunate, and, in making the recommendations which follow, the Commission wishes to be clearly understood that mention of a minimum wage should

²⁷Evidence, p. 1069.

not in any way influence an operator to pay lower wages than are proper in view of the existing situation.

Having regard to all the circumstances, the Commission would recommend that for drivers residing in average Ontario urban centres the minimum wage be an hourly rate such as to yield to highway drivers for a week of sixty hours not less than \$24 and to pick-up and delivery drivers not less than \$20. These amounts might be reduced ten per cent for drivers residing in rural centres or in localities where the cost of living is measurably below that of the metropolitan centres. Wages for helpers, warehousemen and mechanics should be proportionate to those mentioned for drivers.

For reasons set forth in Art. 11.11 respecting working hours, the Commission recommends that private commercial vehicles not exceeding 6000 pounds in licensed gross weight be initially exempted from the regulations respecting wages.

In order that a thoroughly fair relation of wages for motor transport employees in the various parts of Ontario might be established, it is suggested that the Department of Labour be requested to investigate and determine the proper relationship.

Some indication of the relative levels of wages in different localities within the Province might be obtained from the wage scale reported in evidence by the Canadian Pacific Express Company. The urban communities of Canada served by the company were divided into four groups, A, B, C, and D, the arrangement being in decreasing order of population. In the smallest of the four groups the wage levels for vehiclemen ranged from 84 to 91 per cent of the wage levels for group A communities, depending on the experience of the employee. For warehousemen a similar relationship was found to exist.

Some guidance may be obtained from the results of an investigation made by the United States Federal Co-ordinator of Transportation in a report on Hours, Wages and Working Conditions in the Intercity Motor Transport Industries, 1936.²⁸ The average earnings per hour, based on an analysis of 2348 employees, ranged from 39.9 cents for communities of 5000 and under 25,000 in population to 40.2 cents for communities of 25,000 and under 100,000; to 47.2 cents for those of 100,000 and under 500,000; to 48.4 cents for those of 500,000 and under 1,000,000; and to 59.7 cents for those of 1,000,000 and over. The average hours on duty per week varied from 49.1 to 56.3, the lower figure being for communities of 5000 and under 25,000 and the higher for communities of 500,000 and under 1,000,000 in population.

Basis of Payment. The Commission does not consider it practicable to fix a minimum wage per week in the sense that the employee would receive such wage regardless of the number of hours worked. In view of the necessarily intermittent and variable character of the demands on the ordinary trucking organization, it is felt that the most practicable method of payment is that by the hour. However, when a man's ability to earn at an hourly rate is limited by the provision of maximum hours of work per week, there must be in return some compensatory provision to permit him to average a living weekly wage. Irregular and intermittent hours are inherent in the transport business, although it is remarkable to what extent hours can be evened out under compulsion. If irregular hours are inherent in a transport enterprise, then it must absorb the cost of such inherency and demand revenues in proportion. Hourly rates should in that event be so adjusted that the average weekly earnings of

²⁸Part II—Motor Truck Transportation, p. 46.

regular employees would be not less than those recommended above for a 60-hour week.

It is of interest to note that, judging from the experience in the operation of interstate trucking service in the United States, employees in the long run, having regard to all the circumstances, would have nothing to lose through operating on an hourly rate rather than on a weekly rate. The investigation conducted by the Federal Co-ordinator of Transportation, to which reference has already been made,²⁸ shows that in 1933 the average earnings of 4052 drivers and helpers, who were on duty for an average of 47.1 hours per week, were 44.3 cents and on the weekly basis, with an average duty week of 53 hours, 40.7 cents per hour. In the 1935 investigation involving 4797 drivers, the average earnings per hour on the hourly basis, with a duty week of 51.3 hours, were 51 cents and on the weekly basis, with a duty week of 53.9 hours, 51.7 cents per hour.

Whatever wage scale may be adopted should take into account the payment of road expenses, not including one mid-period meal. If the driver is required to meet these himself his wages should be correspondingly adjusted.

The Commission recommends that all hours worked or spent on duty in excess of ten should be paid for at overtime rates.

11.13—Minimum Permissible Wages in Bus Operation. The comments that have been made in the preceding article respecting minimum permissible wages to be paid in trucking operations will in general be applicable to bus operation. Fortunately, as indicated in Chapter VI, the wage levels in bus operations are on the whole very satisfactory. Application of the minimum wage recommended for truck drivers in cities to the drivers of buses in small urban centres, where they are sometimes paid as little as \$16 per week, would appear desirable.

11.14—Character and Fitness of Equipment. *General.* Criticisms of the regulations with respect to the character of equipment bore very strongly on the length of assemblages of units travelling on the highways, more particularly the so-called "double hook-ups." Comments of importance were also submitted concerning brakes, lights, tires, the use of sleeper cabs and the lack of periodic inspection of vehicles.

Length of Motor Trains. Length, rather than composition, was generally regarded by witnesses as the principal source of whatever hazard may be attached to motor trains. Mr. Caley definitely assigned the hazard involved in double hook-ups to their length.²⁹ Mr. Sylvester considered they were safe if not too long and would limit the length to 40 feet.³⁰ While the present limit of length authorized by the regulations is 50 feet, it was pointed out in evidence that assemblages as long as 54 feet are in actual operation on the highways, under special permit.³¹

The hazard attaching to length arises from the manifest difficulty of passing a long vehicle or assemblage of units travelling close to the legal limit of speed. As was pointed out in a communication of Mr. C. E. Hastings to the Railway Association of Canada, filed with the Commission, under characteristic conditions an overtaking vehicle would require some 900 feet of clear roadway

²⁹Evidence, p. 5920.

³⁰Evidence, p. 4351.

³¹Evidence, p. 9736.

in order to pass a train 50 feet in length. Other computations made on different bases have indicated lengths as great as 1600 feet.

Apart from the difficulty involved in obtaining a clear stretch of roadway of perhaps over 1000 feet in length for the purpose of passing, there is in the experience of most drivers an added strain involved in passing assemblages of the present maximum allowable length.

It was represented that such strain as there might be in this connection would also be present when a driver attempted to pass two trucks travelling with a legal distance of 100 feet clear between them. There is, however, the obvious difference that the problem of passing a train 50 feet in length will exist throughout the length of the highway travelled by such trains, whereas the close spacing of 100 feet could hardly be expected to persist for any considerable distance.

Another aspect of hazard is the uncertainty that arises in the mind of the driver through not knowing the length of the vehicle or train that he desires to pass. What might appear to be a single truck or a single hook-up may actually prove to the driver, on turning out, to be a long double hook-up.

Jack-knifing. Much evidence was heard concerning the alleged tendency of double hook-ups to "jack-knife" on slippery hills. This arises when in descending a hill the tractor brakes become effective more quickly than the brakes of the trailers and the latter over-ride, thus causing the train to be thrown violently into a U-shape or an S-shape, with possible obstruction of on-coming traffic. A similar effect may arise when in ascending a hill the tractor wheels do not grip the pavement while the trailer wheels do so.

Most of the witnesses who were disposed to be critical of double hook-ups on the ground of the added strain involved in passing them had no positive information regarding accidents of the kind mentioned to place before the Commission. Mr. Goodale, however, had frequently observed double hook-ups in difficulty on hills in bad weather, to the inconvenience of other road users, and went so far as to characterize such trains as a menace to public safety in icy weather.³² Mr. Webster, of the Dominion Truck Equipment Co., Ltd., who spoke with expert knowledge of equipment, admitted that when the roads are slippery it was necessary to take the greatest of care in operating double hook-ups and that jack-knifing could occur through wrong procedure in applying the brakes.³³

An indirect indication of the greater difficulty of operating such equipment is found in the fact that many operators, including the fifty-six operators who have signed a wage agreement with their employees, pay additional wages to drivers engaged in handling double hook-ups.

It was admitted in evidence that single hook-ups, that is a truck or tractor with a trailer or semi-trailer, were subject to the same danger of jack-knifing as double hook-ups, although by reason of the smaller number of units the consequences might not be so serious.

In view of the evidence as a whole, the Commission recommends that steps should be taken to reduce the length of motor trains from fifty to forty feet within a period of three years, unless special freight highways are provided. This period of grace would permit especially long units, or the special equipment associated with double hook-ups, to be replaced by equipment conforming to the new standard length with little or no loss to the operators.

³²Evidence, pp. 4604, 4606.

³³Evidence, pp. 7547, 7567.

It is believed that the abandonment of double hook-ups would be a step in the line of progress. Already several prominent operators have given them up. Mr. Charles F. Kettering, Vice-president and General Manager of the Research Laboratories of the General Motors Corporation, has stated that "the trend seems to be toward many more smaller, faster, more mobile units."³⁴

In the meantime, it is believed that in the interests of public safety the operation of double hook-ups on the highways should be debarred when the roads are in an icy condition. Consideration of the testimony indicates that there is an ever-present hazard in connection with such equipment when ascending or descending slippery road surfaces on steep grades, and since reliance cannot be made on the quickness of reaction and the resourcefulness of the driver to "pull a double hook-up out of a jack-knife," the only measure that appears adequate in the public interest is to restrict the time of operation of such equipment to those seasons or days when the roads are known to afford satisfactory traction. At least one operator voluntarily refrains from using his double hook-up equipment from October to April.³⁵

In order that other users of the highway may be warned of the peculiar hazard of long assemblages, the Commission recommends that at the rear of every double hook-up a sign be displayed indicating that it is a train and that this sign be illuminated at night.

Carryalls. Numbers of witnesses when questioned stated that they personally did not like the presence of so-called carryalls, that is automobile transport units, on the highways. There was little indication of actual accidents that had occurred, although most of those expressing an opinion on the matter confessed to a sense of special strain in meeting or passing such equipment.

For reasons similar to those adduced in the discussion of the length of motor trains, it is recommended that only a limited number of carryalls be permitted the use of the highways and that on the expiry of a three-year period of grace their over-all length, as in the case of motor trains, be limited to 40 feet.

Width of Vehicles. Some objection was raised to the legal width of eight feet for motor vehicles and suggestions were received that the width should be reduced to as little as seven feet.

It must be admitted that the average driver is never so comfortable in attempting to pass a wide vehicle as he is when attempting to pass an ordinary motor car. The inability to see readily what is ahead without moving over into the lane to his left makes the operation of passing a wide vehicle a somewhat delicate one for many drivers who otherwise feel no particular nervousness in travelling along the highway.

Nevertheless, the Commission recommends that no change be made in the legal width. The eight feet has now become almost universal on this continent. This, or a greater, width is permitted in every State of the American Union and in every Province of Canada.³⁶

While it is impracticable to narrow motor buses if aisle space is to be provided, compensation to other users of the highway is afforded through their moderate length and high speed. Lesser widths than eight feet would suffice for most trucking operations, however, and in order to encourage the adoption

³⁴Proceedings, American Society of Civil Engineers, June, 1938, p. 1127.

³⁵Evidence, p. 7566.

³⁶Evidence, p. 8899.

of such, the width factor has been taken into consideration in the schedule of licence fees proposed in Table 7.3.

Home-made Trailers. Definite criticism was heard from certain witnesses concerning the commonly observed faulty attachments of home-made trailers to the hauling unit, particularly from Mr. Fabian and Mr. Webster. There was no disposition shown to hamper the use of small, light two-wheeled trailers such as are often used by the farmer, but definite suggestions were made to the Commission that more care in enforcing the existing regulations with regard to brakes on trailers should be exercised.

With a view to promoting further safety on the highways, the Commission would recommend that the present requirement of The Highway Traffic Act that every trailer or semi-trailer having a gross weight of 3000 pounds or more shall be equipped with brakes adequate to stop and hold such vehicle³⁷ be amended by reducing the limit to 2000 pounds and that no trailer not equipped with brakes shall be hauled by a vehicle of lesser unloaded weight than the gross weight of the trailer.

Speed of Commercial Vehicles. Many witnesses complained of the congestion in traffic and invitation to accident that arises through heavily-laden motor trains moving up long grades at speeds often as low as four or five miles per hour. Mr. Hastings would require, with a view to relieving the congestion on hills, that the power units of such trains be adequate to maintain a speed of thirty miles per hour on a five per cent grade. There was no denial by any witnesses of the existence of a congestion that is a matter of common knowledge.

While the maintenance of high speed of all vehicles and trains on ascending grades does not appear to be immediately practicable, the Commission would suggest that only such loadings be permitted as will enable a freight vehicle or train to move up a five per cent grade at a minimum speed of fifteen miles per hour.

Brakes. The alleged inability of vacuum brakes to hold a motor train on a hill with a dead engine was carefully explored. Intimations were received that in the interests of public safety a type of brake that would hold such trains for a period of at least fifteen minutes should be installed on all commercial motor vehicles.

While for several reasons this does not appear to be immediately practicable, the feasibility of taking such a step in the not-too-distant future should be taken into consideration. In the meantime, it is of importance to note that modern vacuum brakes with reserve tanks are able to hold trailers on a hill for three or four minutes after the engine goes dead, a sufficient time for the driver to block the wheels.³⁸

Lights. Mr. Hastings definitely criticized the present lighting regulations for commercial motor vehicles, suggesting that the rear lights as now required do not constitute sufficient protection when a truck is for any reason stopped on the highway and more or less in the path of following vehicles. Many accidents have been reported as occurring from rear-end collisions. Such are particularly likely to occur when men are working at the rear of a truck and at times obscuring lights that are below the level of a man's head.

Criticism was also heard of the present arrangement respecting side lights

³⁷R.S.O. 1937, c. 288, s. 11(1)(c).

³⁸Evidence, pp. 7552, 7579.

The danger of other vehicles running into the side of a train, either when attempting to pass it or when approaching it at right angles was stressed.

As a further step in promoting safety in night driving, it is recommended that the lighting arrangement at the rear of all trucks or assemblages of vehicles, and at each side of them, be improved and so fixed that an overtaking driver or one approaching at right angles may be able to judge the nature and length of the vehicle or hook-up that is being approached.

Sleeper-cabs. The omission of any definite reference to the use of sleeper-cabs in the existing regulations was represented as creating uncertainty amongst the operators who wish to employ this type of equipment and who by acquiescence now do so. The Automotive Transport Section of the Canadian Brotherhood of Railway Employees definitely went on record as opposed to the use of sleeper-cabs.³⁹

As pointed out in Art. 11.11, the Commission does not believe that the use of sleeper-cabs should be wholly prohibited in this Province. For certain long distance operations, such as moving, it would appear to be in the public interest to permit their use by special authority. The development of motor transport has not reached the point where intermediate stations can be established at which drivers can be relieved.

Nevertheless, the general use of sleeper-cabs would, in the view of the Commission, be most undesirable. Its views in this regard have been set forth at some length in Art. 11.11.

11.15—Periodic Inspection of Equipment. An almost unanimous view was expressed in evidence favourable to the requirement of periodic inspection of equipment used on the highway. Most witnesses were disposed to consider an annual inspection as necessary, although Mr. Fabian held that the inspection should be semi-annual. Mr. Atkinson believed that it ought to be made for every 25,000 miles of travel.⁴⁰

Having regard to the potentialities for danger inherent in the operation of many heavy and fast-moving commercial motor vehicles on the highways, the Commission is of the opinion that as a prerequisite for the renewal of a licence the operator should present a certificate of mechanical fitness of the vehicle to be licensed. In that way there would of necessity be an annual check-up of all commercial motor vehicles, including those not operating for hire.

It is believed that the suggestion to require a regular semi-annual inspection is scarcely practicable at the present time. There is, of course, the probability of any suspected vehicle being given a spot inspection at any time by the patrolling officers.

The alternative of requiring an inspection after a stated number of miles of operation would be difficult of enforcement. There are manifest advantages in having all vehicles checked upon renewal of the licence.

In the public interest no vehicle which has been involved in a major accident should be allowed to operate on the highway until a complete examination of it has been made.

11.16—Fitness of Drivers. Whether it be due to existing regulations or to other circumstances, the drivers of commercial vehicles are generally well qualified and efficient. Nevertheless, attention was called in evidence to in-

³⁹Evidence, p. 9191.

⁴⁰Evidence, p. 5344.

stances when this was not the case. An important operator revealed that on a medical check-up of the driving staff of his company one driver was found to have a double rupture and only ten per cent. vision.⁴¹

The view was expressed by many witnesses that the regulations should require an annual physical examination of drivers before a driving permit is issued. In addition, it was represented that by reason of the higher degree of skill required for the driving of motor trucks and trains than is necessary for the driving of lighter vehicles, a more severe driving test should be demanded and that this should include a substantial knowledge of the mechanical nature of the equipment.

While the limiting age of drivers is under the regulations specified at twenty-one years, the evidence shows that in two instances at least drivers had been performing that duty from the ages of sixteen and seventeen years.⁴²

To the end that personal fitness of drivers may be secured, the Commission would recommend that before the granting or renewal of any driving permit the applicant should submit from a qualified physician a certificate of physical fitness to undertake the duty of driving. As a further condition in the original granting of a permit the applicant should be subjected to an examination or test of his ability to drive, as well as of his knowledge of the mechanical features of the equipment to be driven.

11.17—Week-end Driving. The extensive congestion that occurs on Saturday afternoons during the summer season was represented as possibly requiring the barring of the operation of motor trucks on the highways for the afternoon mentioned. The prohibition of motor trucks on the highways on Sundays, except for the transportation of perishable goods, was cited as justification for further restriction in this regard.

The Commission is of the opinion that the suggested step is impracticable. Under modern business conditions many trucks set out on Saturday morning for points so far from their home terminal that return by Saturday noon is impossible. In such cases drivers would have to remain away from home till Monday, or the movement would have to be abandoned altogether. Drivers starting trips earlier than Saturday might also frequently find the completion of the run by Saturday noon extremely difficult. A solution of the problem, which is not immediately practicable, would be the allocation of commercial and non-commercial traffic to different highways.

11.18—Accounting and Returns. There appears to have been a very general neglect of the use of the official time-books required to be kept under the regulations. Where these were entered up at all they were uncertain and incomplete and yielded no dependable information.

The absence of specific regulations respecting the method of book-keeping or accounting to be used by motor truck operators or the returns or statements to be filed with the Department of Highways was deplored by many witnesses. Few operators have any idea of their costs, as distinguished from their expenses. Mr. May, speaking for the Ontario Movers' Association, admitted that it was not possible to obtain any useful statement of costs from the members of his Association.⁴³ In some cases no books were kept showing the actual wages paid to drivers.⁴⁴

⁴¹Evidence, p. 4985.

⁴²Evidence, pp. 2477, 2505.

⁴³Evidence, p. 628.

⁴⁴Evidence, p. 1637.

Since very little use has been made of the official timebooks, some more satisfactory device should be instituted by which both drivers and operators would record the time features of every movement. The triplicate timebook suggested by Mr. Fabian⁴⁵ appears to offer some advantages. As an alternative, a driver's card or log might be devised that would contain the necessary information and at the same time afford somewhat closer liaison between the driver and the office.

Regulations should be promulgated requiring every operator of both publicly and privately operated commercial motor vehicles to make an annual return to the regulating authority showing all important statistical facts of his business. Such returns should contain information relating to hours, wages, tonnage handled, mileage operated, and the costs of doing business. With data of this kind available, the regulating authority could judge of the fairness or otherwise of the particular operations under review and would be the better able to devise improvements in regulations for the general benefit of the industry. Moreover, the requiring of an audited financial report would tend to insure that the operator was not continuing to do business at a loss, with disastrous consequences to the creditors and employees and eventual inconvenience of the public.

11.19—Compulsory Insurance. While some evidence was submitted respecting the desirability of compulsory insurance, it is evident that the question comprehends not merely commercial motor transport but also the operation of motor vehicles of all classes on the highways. On the basis of the representations made, however, it is believed that at the present time and without special investigation it is impracticable to go further in this matter than was recommended by the late Mr. Justice Hodgins in his Report on Compulsory Insurance and Safety Responsibility Laws, made in 1930. Certain difficulties would arise in any attempt to introduce further compulsion in the matter of insurance, amongst which is the problem of insuring that exorbitant rates would not be charged by the insurance companies or that there would be no undue refusal of insurance to any applicant. There is, too, the undoubted disposition of reckless persons to become less careful if operating under the protective wing of insurance.

While it is desirable that all operators of motor vehicles of every class should carry insurance, there are manifest difficulties in compelling insurance of operators of the many thousands of small privately-operated motor trucks, such as are used by the farmer or small trader.

The Commission has no jurisdiction to investigate or recommend what means of indemnification should exist for the public against personal injury or property damage, but it nevertheless desires to record its feeling that no one should be allowed to operate a motor vehicle on the highway unless such person is in a position to indemnify anyone against personal injury or property damage. It is possible that the ultimate solution lies along the lines of the Workmen's Compensation Act, and that it may involve the assessment of motor vehicles generally for the benefit of the victims of accidents irrespective of blame.

11.20—Miscellaneous. Stringent regulations should be devised covering the transportation of explosives and dangerous materials by motor vehicle.

⁴⁵Evidence, p. 889.

These might be based on the corresponding regulations in The Railway Act of Canada.⁴⁶

Freight that has been refused by the consignee becomes an embarrassment to the transport operator and authority should be given for the disposal of such accumulated freight in a reasonable manner, such as that now practised by the railways.⁴⁷

Some operators complain of the embarrassment that arises through claims made in respect of concealed damage to goods handled. A definition of liability in matters of this sort might be given consideration in the revised regulations.

11.21—Exemptions for Certain Industries. From all witnesses who testified on behalf of agricultural interests or communities, the evidence was emphatically opposed to any governmental efforts to control hours or wages in motor transport directly affecting the farms. It was represented that any increase in cost of haulage that might result would raise the cost of farm products without the farmer being able to pass these costs along. It was contended that prices are fixed by world market conditions and that there can be little or no difference between the domestic price and the export price. The brief of the Ontario Chamber of Agriculture and the evidence of Mr. Drury and Professor Sissons may be cited in this connection.⁴⁸

No refutation of this evidence was made during the hearings and the Commission believes that the position taken is sound. It consequently would recommend that such additional regulations as may be instituted relating to reduced hours of work or increased pay be not made applicable to trucks owned and operated by farmers or by the farm co-operatives.

Inevitably, the question arises as to whether the same exemption should be granted in respect of the haulage of fruit and vegetables or of canned goods by the canning companies or by truck operators engaged by them. Some of the worst cases of consistently long hours and low pay of truck drivers reported to the Commission were in connection with the transportation of products to and from canning factories. Competition for the haulage of canned goods is particularly keen and the rates have been pared to profitless levels, sometimes on the initiative of carriers themselves and sometimes at the instance of the shipper.

The Commission does not feel that exemption from any new regulations that may be made applicable to public commercial vehicles or to private commercial vehicles generally should apply to those engaged in manufacturing or processing. Considerable tolerance in respect of the canning industry would be permitted under the recommendations contained in this Chapter, whereby for three weeks during the peak season the hours of motor transport employees handling fruit, vegetables and canned goods would be increased to 20 per cent. above the normal.

The exemption for the agricultural industry has been recommended through full realization of the basic importance of the industry and the generally admitted economic difficulties under which it operates. In the opinion of the Commission the exemption should not be extended past the handling by the farmer or the farm co-operatives of the primary products of the farm and the goods or supplies hauled by the farmer or his regular hired help for his own use in connection with the farm and utilizing the farmer's own truck. Inci-

⁴⁶R.S.C. 1927, c. 170, ss. 432, 433.

⁴⁷Railway Act of Canada, R.S.C. 1927, c. 170, s. 356.

⁴⁸Evidence, p. 6866, 7174.

dental service to or co-operation amongst neighbouring farmers should be permitted.

In the same group as the farmer the Commission would include the year-round occupant of a bush farm whose living is derived from forest products.

SECTION 4—ENFORCEMENT OF REGULATIONS

11.22—Present Enforcement. Although there has been much improvement in the enforcement of the regulations during the past five years, the evidence definitely records the feeling of witnesses that there is still less vigour shown in this regard than is called for under the circumstances. There was no suggestion whatever of partisanship or unfairness in the enforcement that has been exercised. Such criticism as was made turned chiefly upon the lack of adequate regulations or upon the fewness of the enforcing officers.

It was stated in evidence, and not disputed, that the five public commercial vehicle inspectors that up to that time had been engaged in enforcing the regulations did not constitute a sufficient force.⁴⁹ Even without any extension of the regulations this number would evidently need to be increased.

There appears to be much merit in the proposal that several specially-equipped motor cars manned by two uniformed officers be provided to carry on the patrolling type of inspection, which is by far the most effective type. Their work would, of course, be supplemented by that done by the motorcycle patrol.

One of the most prevalent infractions requiring the vigilance of the enforcing officers is that of loading trucks beyond their licensed capacity. Another arises from the holder of one type of licence undertaking to carry goods that legally can be carried only by the holder of a licence of a different character. The operator of a private truck may on occasion transport goods belonging to someone else and explain his action in this regard by stating that the goods are his own.⁵⁰

It is the belief of the Commission that with more patrolling officers and the provision of more public weigh scales, open twenty-four hours a day, increased revenue through the promotion of proper licensing would accrue to the Province and the industry itself would be the better through the greater degree of fairness in competition that would result.

In order to facilitate the activities of the enforcing staff, it is recommended that the gross weight of every freight vehicle be clearly painted on it in a place conspicuous at all times. In this way cases of overloading in excess of the licensed gross weight may be readily checked.

With any attempt at the regulation of rates, it is obvious that the operator should be required to weigh every shipment and show the correct weight on the shipping bill. If such were not done a loop-hole for disregarding the standard rate might be afforded.⁵¹

As an aid to the enforcement of regulations it was suggested in evidence that the industry itself appoint inspectors to check up the fairness of the competition. These would act in a manner similar to the inspectors appointed by the Railway Freight Association and might through their activities greatly assist the Transport Board in enforcing the agreed tariffs of rates. However useful voluntary assistance might be, it must be admitted that effective policing can only be secured through special officers trained and paid for the task.

⁴⁹Evidence, p. 1125.

⁵⁰Evidence, p. 7447.

⁵¹Evidence, p. 1102.

The work of the enforcing staff would, of course, be greatly furthered by the prescription of penalties of appropriate severity for every type of infraction of the regulations. The Commission believes that suspension of licence is a particularly effective form of penalty.

With a view to furthering fair competition, action should be taken to remove the disparity that exists in the credit given by transport organizations to shippers. According to the evidence, the latter often demand and are granted thirty to sixty days' credit by motor truck operators on transport charges, whereas under the regulations of the Board of Transport Commissioners they are compelled to pay railway charges within seven days.

CHAPTER XII

ANNUAL COSTS OF CONSTRUCTING, MAINTAINING AND ADMINISTERING THE HIGHWAYS OF ONTARIO

SECTION 1—TOTAL COSTS OF THE PUBLIC ROADS OF ONTARIO, 1889-1937

12.1—General. Since the determination of the annual costs of constructing, maintaining and administering the public roads of Ontario involves annual carrying charges on previous capital expenditures, it has been necessary to ascertain the total costs of the roads of the Province up to the present time.

To this end a very careful study was made of the Public Accounts of Ontario, of the annual reports of the various Departments concerned and of statements furnished by these Departments at the request of the Commission. Wherever information in respect of a matter was contained in the Public Accounts this naturally was allowed to govern, but where such information was lacking it was necessary to adopt such figures from other sources as appeared to be sufficiently reliable for the purpose.

In some instances the establishment of the expenditures proved to be very difficult. Changes in accounting methods have arisen with changes of Government and in certain matters, as, for example, the expenditures made by the counties and townships on public roads not constructed or maintained under the Highway Improvement Act, no data are available. The practice has varied from time to time with respect to the charging of expenditures to construction or, on the other hand, to maintenance. It has consequently been difficult in some instances to differentiate between the two. Adoption of what appear to be normal percentages based on the records as a whole was consequently necessary. In certain cases, too, the expenditures were reported for groups of years or periods. It was then necessary to allocate the total expenditures to the various years in general accordance with the trend of expenditure at that time.

Whatever inaccuracy may exist in the estimate of total expenditure on the public roads of the Province is probably in the direction of an under-estimate. Incomplete and missing records have prevented the inclusion of all of the amounts spent on the public highways, but as the shortcomings of the records pertain to periods when expenditures were low, the total error is believed to be of small importance.

Despite certain representations to the contrary,¹ the Commission is of the unanimous opinion that the roads of Northern Ontario should be considered as an integral part of the highway system of the Province. Motor traffic now moves over every passable road wherever it may be and it is no longer practicable to delimit arbitrarily any region within which the highway system may properly be considered as contained and in respect of which all highway revenue should be spent. For these reasons the cost of the roads of Northern Ontario that have been financed by any public authority are included in the cost analyses that follow.

12.2—Expenditures by the Province. *General.* Table 12.1 indicates the expenditures made on roads and streets by the Province of Ontario from 1889

¹Evidence, pp. 8956, 8959, 9124, 9495.

to 1937, inclusive. For convenience, the table includes a statement of the subsidies received from the Dominion of Canada under the Canada Highways Act, under unemployment relief legislation and, in addition, the monies contributed from the Grade Crossing Fund. The circumstances associated with the granting of these subsidies are discussed in Art. 4.13. Recorded private subscriptions, although small in total, have been included for the sake of completeness.

Expenditures by the Department of Highways. Expenditures incurred in organized Ontario by the Department of Highways began in 1903, by virtue of the Highway Improvement Act of 1901. In accordance with that Act, as pointed out in Art. 4.4, the Province undertook to contribute 33⅓ per cent. of the cost of approved highways in county systems, applicable to construction, superintendence, equipment and material for road building. The principle of aid to townships was initiated in 1915 (Art. 4.5) and in 1917 the authorization of expenditures in connection with the provincial highway system was given.

The expenditures indicated for the Department of Highways are over and above all Dominion subsidies, private subscriptions, payments by municipalities and receipts for materials sold, cement bags returned, repayment for minor work done, equipment rentals and the small amount of revenue collected under the regulations for gasoline pump and sign permits.

Since the important changes in organization mentioned in Arts. 4.3 and 4.7, the Department of Highways has undertaken expenditures for certain miscellaneous work formerly done by the Department of Public Works and the Department of Northern Development, such as storage dams, municipal drainage and maintenance of locks. These non-highway expenditures are, however, relatively small and have been deducted.

It is apparent from Table 12.1 that up to 1917 the expenditures made by the Department of Highways were chiefly in respect of construction. Beginning in that year the maintenance expenditures increased rapidly, due in part to the Province assuming 20 per cent. of the cost of maintenance of county roads in 1915 and to the further fact that under the provincial highway plan the Province at the beginning met 70 per cent. of the cost of both maintenance and construction of the affected highways.

Expenditures by Attorney-General's Department. Amounts expended by the Attorney-General's Department for motorcycle police patrol were taken from the Public Accounts. They involve salaries and expenses connected with the patrol force and its headquarters with a *pro rata* allowance for uniforms, etc., chargeable in part to general police duty.

Expenditures by Northern Development Department and Colonization Roads Branch. Large expenditures have been made, chiefly in the unorganized parts of Ontario, by the Department of Northern Development and by the Colonization Roads Branch. In some instances, as pointed out in Art. 4.3, expenditures have been made in the organized municipalities of the Province. The expenditures made by these two provincial bodies relate to that portion of Ontario north of the area to which the jurisdiction of the Department of Highways was confined up to 1936. Civil government costs, which are relatively small, and were almost exclusively in connection with road work, are included with maintenance. The early expenditures on Northern Development roads had to be divided somewhat arbitrarily. For the year 1913, 5 per cent. was allocated to maintenance; for 1914, the proportion was taken as 10 per cent.; for 1918, it was assumed as 30 per cent., and for other years as proportional amounts. For the period 1903-1918 the Colonization Road expenditures are divided by allocating 60 per cent. to capital expenditure and 40 per cent. to maintenance.

Table 12.1—Expenditures Made on Roads and Streets by the Province of Ontario From January 1, 1889, to March 31, 1937, and, in Addition, the Dominion Subsidies and Private Subscriptions Received

Dominion Subsidies					Provincial Expenditures															Total Net Expenditure by the Province			
Fiscal Year	Canada Highways Act	Unemployment Relief	Grade Crossing Fund	Private Subscriptions	By Highways Department (a) for King's Highways, County Roads and Township Roads in Organized Ontario			By Attorney-General's Department (b) for Motor Cycle Police	By Northern Development Department (c) and Colonization Roads Branch for Roads Mainly in Unorganized Ontario			By Public Works Department (d)			Total			Fiscal Year					
					Capital	Maintenance	Total		Capital	Maintenance	Total	Bridges, Capital Only	Inter-provincial Bridge	Capital	Maintenance and Administration	Total							
Ending Dec. 31,	1889	...	...	...	...	...	...	...	...	61,959.98	41,306.65	103,266.63	...	...	61,959.98	41,306.65	103,266.63	Dec. 31,	1889
1890	75,139.96	50,093.30	125,233.26	...	...	75,139.96	50,093.30	125,233.26	1890					
1891	58,987.39	39,324.92	98,312.31	...	...	58,987.39	39,324.92	98,312.31	1891					
1892	62,193.24	41,462.15	103,655.39	...	...	62,193.24	41,462.15	103,655.39	1892					
1893	67,299.78	44,866.52	112,166.30	...	...	67,299.78	44,866.52	112,166.30	1893					
1894	70,127.87	46,751.91	116,879.78	...	...	70,127.87	46,751.91	116,879.78	1894					
1895	70,023.95	46,682.64	116,706.59	3,000.00	...	73,023.95	46,682.64	119,706.59	1895					
1896	61,631.54	41,087.70	102,719.24	2,000.00	...	63,631.54	41,087.70	104,719.24	1896					
1897	56,027.46	37,351.64	93,379.10	...	...	56,027.46	37,351.64	93,379.10	1897					
1898	64,472.57	42,981.72	107,454.29	...	...	64,472.57	42,981.72	107,454.29	1898					
1899	54,278.45	36,185.64	90,464.09	...	...	54,278.45	36,185.64	90,464.09	1899					
1900	80,355.66	53,570.44	133,926.10	...	...	80,355.66	53,570.44	133,926.10	1900					
1901	83,280.83	55,520.55	138,801.38	11,500.00	...	94,780.83	55,520.55	150,301.38	1901					
1902	117,747.64	78,498.42	196,246.07	8,600.00	...	126,347.64	78,498.42	204,846.07	1902					
1903	22,910.51	2,298.54	25,209.05	...	...	95,555.06	67,700.63	163,255.69	...	...	125,688.31	69,999.17	222,687.48	1903					
1904	91,527.54	1,300.00	92,827.54	...	...	105,372.44	74,098.30	179,470.74	...	...	253,436.62	75,398.30	328,834.92	1904					
1905	46,081.59	1,537.50	47,619.09	...	...	106,987.81	75,175.21	182,163.02	...	...	191,316.99	76,712.71	268,029.70	1905					
1906	95,141.89	3,405.65	98,547.54	...	...	131,735.62	92,290.96	224,026.58	...	...	273,363.61	95,696.61	369,060.22	1906					
1907	63,390.98	4,073.45	67,464.43	...	...	190,143.83	131,725.04	321,868.87	...	...	368,968.64	135,798.49	504,767.13	1907					
1908	107,524.63	4,302.06	111,826.69	...	...	275,936.84	189,607.61	465,544.45	...	...	495,868.60	193,909.67	689,778.27	1908					
1909	132,480.98	4,464.31	136,945.29	...	...	269,525.80	185,074.07	454,599.87	...	...	494,664.25	198,538.38	693,202.63	Oct. 31,	1909				
1910	150,316.18	5,151.03	155,467.21	...	...	271,647.20	188,608.10	460,255.30	...	...	499,816.38	191,759.13	691,575.51	1910					
1911	179,688.26	5,202.54	184,890.80	...	...	270,666.76	185,737.54	456,404.30	...	...	612,402.51	190,940.08	803,342.59	1911					
1912	274,688.10	9,808.11	284,496.21	...	...	497,007.50	181,367.68	678,375.18	...	...	905,466.18	191,175.79	1,096,641.97	1912					
1913	335,467.66	9,035.93	344,503.59	...	...	1,254,093.35	224,230.30	1,478,323.65	...	...	1,697,294.57	233,266.23	1,930,560.80	1913					
1914	300,198.97	11,192.55	311,391.52	...	...	1,012,952.24	282,186.55	1,295,138.79	...	...	1,416,924.27	293,379.10	1,710,303.36	1914					
1915	261,840.61	12,352.49	274,193.10	...	...	604,971.86	180,254.34	785,226.20	...	...	957,197.29	192,606.83	1,149,804.12	1915					
1916	270,513.34	66,692.13	337,205.47	673,191.89	217,849.77	891,041.66	86,434.34	930,139.57	284,541.90	1,214,681.47	1916				
1917	350,163.76	239,673.82	589,837.58	...	...	520,047.16	238,055.84	758,103.00	...	...	991,502.11	477,729.66	1,469,231.77	1917					
1918	642,208.72	143,558.23	785,766.95	...	...	699,800.63	308,419.23	908,219.76	...	...	1,374,920.73	451,977.46	1,826,898.19	1918					
1919	1,895,128.74	562,036.09	2,457,164.83	...	...	1,324,833.63	542,213.92	1,867,047.56	...	...	1,414,451.88	1,104,250.02	2,518,701.90	1919					
1920	6,883,405.54	1,060,461.12	7,943,866.66	...	...	1,149,739.59	553,441.32	1,703,180.91	...	...	8,204,701.09	1,613,902.44	9,818,603.53	1920					
1921	1,315,633.67	...	...	...	10,840,613.84	1,104,205.15	11,944,818.99	...	...	1,393,417.32	534,800.51	1,928,217.83	...	...	12,434,007.65	1,639,005.66	14,073,013.31	1921	
1922	2,058,613.62	...	...	...	13,634,475.72	950,581.76	14,585,057.48	...	...	1,543,593.50	835,946.16	2,379,539.66	...	...	15,407,996.80	1,786,527.92	17,194,524.72	1922	
1923	705,604.24	...	...	...	17,553,592.38	3,072,752.59	20,626,344.97	...	...	2,442,391.79	1,078,143.80	3,520,535.59	...	...	20,308,244.28	4,150,896.39	24,459,140.67	1923	
1924	839,303.48	...	...	...	4,473,907.09	2,285,732.68	6,759,639.77	...	...	2,079,066.64	1,325,608.65	3,404,675.29	...	...	6,821,976.37	3,611,341.33	10,433,317.70	1924	
1925	865,414.90	...	...	...	3,592,651.26	2,626,691.26	6,219,342.52	...	...	2,487,593.02	1,370,316.02	3,857,909.04	...	...	193,244.64	3,997,007.28	10,240,496.93	1925	
1926	50,000.00	...	...	...	6,367,340.68	2,724,129.21	9,091,469.89	...	...	2,371,227.49	1,638,372.62	4,009,600.11	...	...	8,887,423.22	4,362,501.83	13,249,925.05	1926	
1927	53,269.37	...	...	...	8,345,378.46	3,724,693.63	12,070,072.09	...	...	2,633,653.58	1,805,255.99	4,438,909.57	...	...	12,907,102.11	5,529,949.62	16,638,788.77	1927	
1928	11,543,617.12	3,897,974.37	15,441,591.49	...	...	2,125,383.84	1,398,895.54	3,524,279.38	...	...	13,779,254.49	5,970,989.67	19,750,244.16	1928					
1929	12,741,905.70	4,185,806.66	16,927,706.36	...	...	3,466,911.41	1,885,137.92	5,352,049.33	...	...	155,084.45	6,070,938.58	22,434,840.14	1929					
1930	12,891,348.68	4,856,156.11	17,747,504.79	104,000.00	...	5,715,038.62	2,085,716.49	7,800,755.11	...	...	18,748,342.41	7,045,872.60	25,794,215.01	1930					
1931	...	1,000,000.00	29,545.46	...	12,621,199.86	4,170,787.98	16,791,987.84	238,000.00	...	6,225,025.85	2,050,960.42	8,275,985.77	...	...	124,099.55	6,459,748.40	25,430,073.16	1931			
1932	...	5,345,597.34	46,604.49	...	7,303,763.32	3,748,300.91	11,052,064.23	214,000.00	...	8,955,980.37	2,135,184.30	11,091,164.67	...	...	965,304.06	6,097,485.21	22,452,532.96	1932			
1933	...	1,978,178.41	119,671.84	...	3,316,486.22	3,206,513.43	6,522,999.65	242,000.00	...	3,200,677.96	993,173.74	4,193,851.70	...	...	6,567,157.54	4,441,687.17	11,008,844.71	1933			
1934	...	135,660.26	88,095.37	50,200.00	10,655,782.93	3,596,073.58	14,251,856.51	210,000.00	...	21,812,425.34	1,910,499.52	23,722,924.86	...	78,574.48	32,558,490.83	5,716,573.10	38,275,063.93	1934					
1935	...	286,148.57	18,511.49	...	1,907,876.63	1,994,829.00	3,902,705.63	108,000.00	...	9,630,230.66	611,882.96	10,242,113.62	...	...	11,561,883.52	2,714,711.96	14,276,595.48	Mar. 31,	1935		
1936	...	4,803,580.98	23,724.89	...	2,647,274.09	3,895,655.80	6,542,930.89	203,000.00	...	11,252,151.22	2,227,682.02	13,479,833.24	...	...	13,937,497.31	6,326,338.22	20,263,835.53	1936			
1937	...	6,319,734.10	138,916.38	...	4,841,747.46	4,635,511.83	9,477,259.29	232,000.00	...	3,335,274.98	1,328,611.31	4,663,886.29	...	...	8,217,047.31	6,196,123.14	14,413,170.53	1937			
Total	\$5,887,283.28	\$19,863,899.66	\$465,069.92	\$50,200.00	\$157,381,543.16	\$56,822,937.10	\$214,204,480.26	\$1,551,000.00	\$100,908,218.62	\$30,462,927.76	\$131,370,246.38	\$4,243,198.43	\$11,708.08	\$262,544,668.29	\$88,835,964.86	\$351,380,633.15							
To 1918, inclusive:	\$ 3,324,143.72	\$ 524,048.34	\$ 3,848,192.06	...	\$ 7,763,162.31	\$ 3,476,065.38	\$ 11,239,227.69	\$1,537,284.11	...	\$ 12,624,590.14	\$ 4,000,113.72	\$ 16,624,703.86							
1919 to 1937, inclusive:	...	\$26,266,452.86	...	...	\$154,057,399.44	\$56,298,888.76	\$210,356,288.20	...	\$ 93,145,056.31	\$26,985,862.38	\$120,131,018.69	\$2,705,914.32	\$11,708.08	\$249,920,078.15	\$84,835,851.14	\$334,755,929.29					

(a) Net expenditure of the Province, after deducting all Dominion subsidies, private subscriptions, payments by municipalities, and receipts for material sold, cement bags returned, minor work done, equipment rentals, and the small amount of revenue charged (under the regulations) for gasoline pump and sign permits.

(b) From the Public Accounts figures for salaries of motor cycle patrol, motor cycle patrol headquarters and insurance, with a *pro rata* allowance for uniforms, etc.

(c) Expenditures are for that portion of Ontario North of the area to which the jurisdiction of the Department of Highways was confined up to 1936. Civil government costs which are relatively small, are included with maintenance. Colonization road costs, 1903-1918, are divided 40% for maintenance and 60% for capital. Northern Development Road costs are divided 5% for maintenance, 1913; 10% for 1914; increasing to 30% for 1915.

(d) From statement by the Department of Public Works.

General Note: The amounts given in the table represent disbursements made in the fiscal year. In the case of county and township roads they represent, up to and including

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Expenditures by Department of Public Works. Since Confederation, the Ontario Department of Public Works has expended substantial capital amounts on bridge work in unorganized Ontario, and since 1889, as indicated in Table 12.1. No record is available of the expenditures on maintenance.

Total Expenditures by Provincial Departments. From Table 12.1 it appears that the total capital expenditure made by the Province for the fiscal years 1889 to 1937, inclusive, was \$262,544,668.29. The expenditure on administration and maintenance amounted to \$88,835,964.86 and the total expenditure under both headings amounted to \$351,380,633.15. As is indicated by the table, only a comparatively small portion of these expenditures was made up to the end of the fiscal year 1918. It is obvious that the rapid development of motor transport in the Province since that date has been the cause of the greater part of the expenditure on highways.

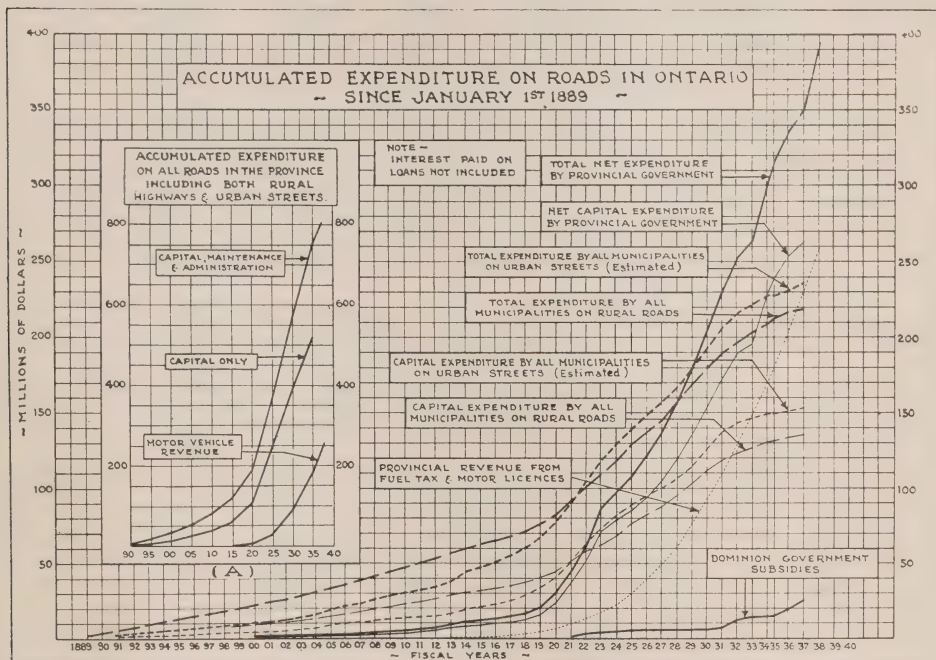


FIG. 5—Accumulated Expenditure on Roads in Ontario Since January 1, 1889.

The accumulated expenditure on roads in the Province is graphically indicated in Fig. 5. Both total net expenditure and net capital expenditure made by the Government of the Province are seen to have grown with great rapidity after 1918, whereas before that date the rate of growth was moderate.

With the complete merger of all highway operations under the Department of Highways, a simpler classification of roads was established for the fiscal year 1938, and expenditures cannot be shown divided under the headings of Table 12.1. For the year mentioned the net capital expenditure, as is shown in Table 12.11, was \$34,177,388.54 and the expenditure for maintenance and administration was \$8,757,375.99.

The total provincial expenditure from January 1, 1889, to March 31, 1938, was \$394,315,397.68, divided into \$296,722,056.83 for construction and \$97,593,340.85 for maintenance.

Per Capita Expenditures by Provincial Departments. Annual expenditure per capita has varied through successive five-year periods as shown in Table 12.2. Since a determination of provincial per capita expenditures can only be of value when considered in relation to motor vehicle revenue, the latter is shown on the same basis in the table.

Table 12.2—Comparison of Annual Provincial Expenditures Per Capita on Highways with Motor Vehicle Revenue Per Capita by Five-Year Periods

Fiscal Years	Population at Middle Year	Construction	Maintenance	Total	Motor Revenue per Capita.
1919 to 1923, inclusive	2,933,662	\$4.07	\$0.70	\$4.77	\$0.97
1924 to 1928, inclusive	3,182,672	2.95	1.47	4.42	2.72
1929 to 1933, inclusive	3,431,683	4.49	1.76	6.25	5.19
1934 to 1938, inclusive (4 yrs. 5 mos.)	3,700,000	6.14	1.82	7.96	6.68

12.3—Expenditures by the Municipalities for Rural Roads. *General.*

Table 12.3 gives the expenditures made on roads and streets by the municipalities of Ontario from January 1, 1889, to March 31, 1937, classified into capital and maintenance. The sources of the information have been various, but reliance has been made on the Public Accounts of Ontario where this source yielded the necessary data. For all practical purposes the totals represent the physical work done to the end of 1936.

King's Highway Account. Capital and maintenance expenditures on King's Highways account were fortunately directly obtainable from the Public Accounts of the Province. The amounts indicated in the table are those which the counties and separated urban municipalities were called upon to contribute to the King's Highways during the period that contribution was required under the then existing legislation.

County Roads. The figures incorporated in the table for capital and maintenance expenditures by the counties and separated urban municipalities on county and suburban roads are taken from the annual reports of the Department of Highways and from the answers given by the Department to the questionnaire submitted by the Commission. The reports mentioned give totals up to 1906, 1911, 1915, 1917 and 1918 and arbitrary division of the total amounts for four- or five-year periods had to be made, as is mentioned in the table. No information was available concerning the amount spent by the counties apart from work done under the Highway Improvement Act, that is, prior to adopting county road systems under that Act. The totals given would consequently be increased to some extent if the records of such expenditures could be obtained.

Township Roads. Certain difficulties were experienced in assembling the figures for expenditures on township roads made by the townships themselves. For the period 1889-1908 the information was obtained from the summation of cash expenditures by counties in The Annual Report on Highway Improvement, 1910. Expenditure in the form of statute labour, here included as maintenance, was obtained from the 1907 and 1910 reports. For the period 1913-1918 the annual reports gave total expenditures and equal division was made between maintenance and construction. For 1920-37 the facts were obtained from the answers to the questionnaire given by the Department of Highways. No information being available respecting the expenditures on township roads in Southern Ontario not eligible for subsidy under the Highway Improvement Act, such could not be included. Expenditures made by the rural municipalities of

Table 12.3—Expenditures Made on Roads and Streets by the Municipalities of Ontario from January 1, 1889, to March 31, 1937.

RURAL ROADS													URBAN STREETS (g)			
Fiscal Year	King's Highways Account (a)		County Roads (b)		Township Roads (d)		Colonization Roads (e)		Toronto and Hamilton Highway (f)		Total Expenditure by Municipalities on Rural Roads			(Estimated)		
	Capital	Maintenance	Capital	Maintenance	Capital	Maintenance	Capital	Maintenance	Capital	Maintenance	Capital	Maintenance	Total	Capital	Maintenance	Total
Ending																Calendar Year
Dec. 31,																
1889	...	...	...	...	680,687.00	1,100,000.00	...	...	...	...	680,687.00	1,100,000.00	1,780,687.00	360,000	400,000	760,000
1890	...	...	...	...	779,044.00	1,100,000.00	...	...	...	...	779,044.00	1,100,000.00	1,879,044.00	360,000	400,000	760,000
1891	...	...	...	...	759,217.00	1,100,000.00	...	...	...	...	759,217.00	1,100,000.00	1,859,217.00	360,000	400,000	760,000
1892	...	...	...	...	742,491.00	1,100,000.00	...	...	...	...	742,491.00	1,100,000.00	1,842,491.00	360,000	420,000	780,000
1893	...	...	...	...	806,508.00	1,100,000.00	...	...	...	...	806,508.00	1,100,000.00	1,906,508.00	360,000	420,000	780,000
1894	...	...	...	...	795,393.00	1,100,000.00	...	...	...	...	795,393.00	1,100,000.00	1,895,393.00	367,000	437,000	804,000
1895	...	...	...	...	640,184.00	1,100,000.00	...	...	...	...	640,184.00	1,100,000.00	1,740,184.00	370,000	450,000	820,000
1896	...	...	...	...	695,033.00	1,094,700.00	...	...	...	...	695,033.00	1,094,700.00	1,789,733.00	380,000	450,000	830,000
1897	...	...	...	...	706,023.00	1,051,000.00	...	...	...	...	706,023.00	1,051,000.00	1,757,023.00	390,000	450,000	840,000
1898	...	...	...	...	778,898.00	1,051,000.00	...	...	...	...	778,898.00	1,051,000.00	1,829,898.00	450,000	450,000	900,000
1899	...	...	...	...	881,170.00	1,051,000.00	...	...	...	...	881,170.00	1,051,000.00	1,932,170.00	420,000	458,000	878,000
1900	...	...	...	...	895,014.00	1,051,000.00	...	...	...	...	895,014.00	1,051,000.00	1,946,014.00	420,000	470,000	890,000
1901	...	...	...	...	967,595.00	1,051,000.00	...	...	...	...	967,595.00	1,051,000.00	2,018,595.00	420,000	480,000	900,000
1902	...	...	44,567.64	...	960,637.00	1,051,000.00	...	...	...	...	1,005,204.64	1,051,000.00	2,056,204.64	420,000	490,000	910,000
1903	...	...	(c) 70,000.00	...	1,180,076.00	1,051,000.00	...	...	...	...	1,250,076.00	1,051,000.00	2,301,076.00	420,000	500,000	920,000
1904	...	...	(c) 190,000.00	...	1,248,854.00	1,051,000.00	...	...	...	...	1,438,854.00	1,051,000.00	2,489,854.00	437,000	505,000	942,000
1905	...	...	(c) 120,000.00	...	1,216,342.00	1,051,000.00	...	...	...	...	1,336,342.00	1,051,000.00	2,387,342.00	450,000	550,000	1,000,000
1906	...	...	...	...	1,432,788.00	1,100,000.00	...	...	...	...	1,599,751.09	1,100,000.00	2,699,751.09	1,000,000	625,000	1,625,000
1907	...	...	(c) 255,000.00	...	1,380,270.00	1,100,000.00	...	...	...	...	1,635,270.00	1,100,000.00	2,735,270.00	1,500,000	725,000	2,225,000
1908	...	...	(c) 285,000.00	...	1,403,311.00	1,141,976.00	18,725.00	12,483.00	...	...	1,708,036.00	1,154,459.00	2,862,495.00	2,000,000	825,000	2,825,000
1909	...	...	(c) 293,000.00	...	(c) 1,250,000.00	(c) 1,250,000.00	32,414.00	21,609.00	...	...	1,575,414.00	1,271,609.00	2,847,023.00	2,619,000	1,011,000	3,630,000
1910	...	...	(c) 368,155.59	...	(c) 1,250,000.00	(c) 1,250,000.00	47,639.00	31,760.00	...	...	1,665,794.59	1,281,760.00	2,947,554.59	3,650,000	1,050,000	4,700,000
1911	...	...	474,715.02	...	(c) 1,250,000.00	(c) 1,250,000.00	34,444.00	22,962.00	...	...	1,759,159.02	1,272,962.00	3,032,121.02	4,000,000	1,700,000	5,700,000
1912	...	...	599,087.50	...	(c) 1,250,000.00	(c) 1,250,000.00	45,383.00	30,353.00	...	...	1,904,617.50	1,280,353.00	3,184,970.50	5,000,000	2,200,000	7,200,000
1913	...	...	565,122.80	...	1,380,851.00	1,380,851.00	55,190.00	36,794.00	...	...	2,001,163.80	1,417,645.00	3,418,808.80	3,900,000	1,700,000	5,600,000
1914	...	...	532,681.32	...	1,307,568.00	1,307,568.00	75,246.00	50,164.00	...	...	1,906,495.32	1,367,732.00	3,264,227.32	2,640,000	1,416,000	4,056,000
1915	...	...	541,026.71	...	840,094.00	840,094.00	48,248.00	32,166.00	...	...	1,429,368.71	872,260.00	2,301,628.71	1,300,000	1,200,000	2,500,000
1916	...	...	627,783.39	...	865,344.00	865,344.00	49,783.00	33,189.00	...	...	1,542,910.39	898,535.00	2,441,445.39	1,900,000	1,600,000	3,500,000
1917	...	...	678,006.16	231,720.39	807,895.00	807,895.00	45,778.00	30,518.00	230,000.00	...	1,756,673.16	1,070,133.39	2,826,806.55	2,600,000	2,600,000	5,200,000
1918	...	5,251.57	1,162,258.35	237,506.42	884,392.00	884,392.00	48,874.00	32,449.00	230,000.00	...	2,325,424.35	1,159,597.59	3,484,922.34	3,500,000	2,200,000	5,700,000
1919	...	14,733.64	2,099,042.13	992,177.72	(c) 750,000.00	(c) 750,000.00	70,448.83	46,965.89	230,000.00	14,159.37	2,499,490.96	1,818,056.62	4,317,547.58	4,596,000	2,589,000	7,185,000
1920	...	78,261.82	3,007,478.87	1,314,117.51	689,888.80	651,626.11	97,531.35	65,020.90	236,334.37	2,917.88	4,031,213.39	2,111,944.22	6,143,157.61	7,500,000	2,700,000	10,200,000
1921	602,549.40	...	4,436,195.49	1,531,875.41	1,261,062.82	1,503,437.90	71,703.99	6,407,363.68	...	...	5,671.46	9,571,720.05	10,000,000	2,800,000	12,800,000	19,200,000
1922	1,483,091.97	78,057.47	3,712,591.06	1,192,029.39	1,031,694.02	1,472,429.90	89,044.22	133,566.33	...	...	16,847.94	10,800,943.38	9,209,352.30	11,697,000	3,000,000	14,697,000
1923	934,205.80	54,248.20	2,717,106.23	1,268,344.69	995,068.86	1,392,261.06	161,492.72	107,661.80	...	...	33,360.44	12,855,876.19	10,500,000	9,000,000	13,500,000	22,500,000
1924	2,741,853.65	92,301.78	2,164,361.62	1,483,306.00	959,293.01	1,518,160.19	136,318.18	90,878.19	...	...	43,794.29	13,001,826.56	9,228,415.81	11,697,000	3,000,000	14,697,000
1925	4,825,007.31	242,800.44	2,425,161.46	1,245,169.67	1,032,208.66	1,487,949.35	192,420.80	126,880.53	...	...	154,382.33	14,276,605.90	10,930,938.82	6,900,000	3,200,000	10,100,000
1926	1,677,889.65	299,931.34	2,132,412.21	1,327,308.07	1,510,211.23	1,435,976.19	60,677.98	40,677.98	...	...	5,381,185.07	9,798,852.87	6,100,000	3,150,000	9,250,000	12,600,000
1927	1,317,135.87	255,335.31	2,607,768.76	1,076,252.10	1,927,461.42	1,750,284.84	192,055.10	128,056.74	...	...	6,404,421.15	3,210,108.99	9,254,530.14	5,883,000	1,000,000	6,883,000
1928	1,535,018.76	415,787.88	3,320,874.58	1,103,968.15	2,232,404.40	1,885,101.82	87,256.24	58,170.82	...	...	7,175,553.98	3,463,028.67	10,638,582.65	6,100,000	3,100,000	9,200,000
1929	1,826,454.74	346,698.44	3,464,839.49	1,157,551.65	2,641,740.62	2,106,692.12	92,261.48	61,507.66	...	...	8,025,296.33	3,581,649.77	11,606,946.10	3,160,000	1,100,000	4,260,000
1930	2,927,209.81	322,733.00	3,816,361.49	1,193,366.68	2,184,200.23	1,604,754.57	148,794.58	99,196.39	...	...	8,477,566.11	3,920,050.64	11,739,616.75	3,100,000	1,000,000	4,100,000
1931	2,518,208.77	399,692.07	2,608,225.71	1,091,490.22	1,889,773.79	1,499,003.24	196,855.49	91,236.99	...	...	8,947,363.76	2,974,422.52	9,421,786.28	10,536,000	3,100,000	13,636,000
1932	2,850,547.12	381,547.12	3,117,251.54	780,206.69	1,117,251.54	1,060,480.62	143,892.49	95,928.32	...	...	4,872,090.84	2,639,222.17	7,511,313.01	6,500,000	3,100,000	9,600,000
1933	2,238,898.17	(c) 275,000.00	763,688.00	831,415.19	740,438.49	876,078.00	71,575.27	53,559.93	...	...	3,315,599.93	2,032,208.93	4,776,808.86	3,250,000	3,100,000	6,350,000
1934	972,351.16	(c) 434,000.00	1,256,820.12	868,190.87	1,108,159.09	1,375,776.26	82,079.56	54,719.71	...	...	3,419,409.93	2,732,684.84	6,152,094.77	2,250,000	3,003,000	5,253,000
1935	125,465.18	(c) 184,000.00	391,734.01	881,294.75	463,876.50	1,288,865.47	57,313.70	38,209.13	...	...	1,038,389.39	2,392,369.35	3,430,758.74	1,750,000	2,500,000	4,250,000
1936	1,554,409.46	213,934.26	610,956.06	892,758.19	288,980.26	593,513.50	85,259.75	56,839.83	...	...	2,539,605.53	2,157,045.78	4,696,651.31	1,765,000	2,598,000	4,363,000
1937	1,192,168.02	172,899.46	...	...	70,788.81	70,788.81	97,244.45	62,899.66	...	...	1,500,201.28	3,068,719.21	...	...	...	...
Total	\$31,323,652.84	\$4,327,082.08	\$48,828,530.30	\$20,309,107.91	\$51,867,116.70	\$57,110,197.66	\$2,617,871.27	\$1,745,247.20	\$926,334.37	\$117,751.38	\$135,563,505.48	\$83,609,386.23	\$219,172,891.71	\$166,082,000	\$79,555,000	\$245,637,000
To 1918, inclusive:	...	\$ 5,251.57	\$ 6,960,361.57	\$ 469,225.81	\$30,030,680.00	\$32,681,820.00	\$ 501,671.00	\$ 334,447.00	\$460,000.00	...	\$ 37,952,712.57	\$33,490,744.38	\$ 71,443,456.95	\$ 41,957,000	\$26,192,000	\$ 68,149,000
1919-1937, inclusive:	...	\$4,321,830.51	\$41,868,168.73	\$19,839,882.10	\$21,836,436.70	\$24,428,376.66	\$2,116,200.27	\$1,410,800.20	\$466,334.37	\$117,751.38	\$ 97,610,792.91	\$50,118,641.85	\$147,729,434.76	\$124,125,000	\$53,363,000	\$177,488,000

Notes:

Expenditures are for the fiscal year in the case of the King's Highways, township roads in Northern Ontario, colonization roads, and the Toronto and Hamilton Highway. They are for the calendar year shown at the right side of the table in the case of county roads, township roads in Southern Ontario and urban streets.

Up to and including 1934, expenditures on road work for the fiscal year ending October 31 differed but little from the comparable figure for the calendar year.

The grand totals shown in the table represent, as closely as may be determined, the expenditure on physical work performed up to December 31, 1936.

(a) From the Public Accounts of Ontario.

(b) From the Annual Reports of the Department of Highways and answers to questionnaires. Totals given to 1906, 1911, 1915, 1917 and 1918 in Reports. No information available concerning years between 1912 and 1914, the counties appear from work done under The Highway Improvement Act.

Northern Ontario for the years 1922 to 1937 have been estimated as equal to the subsidies obtained from the Province, and 50 per cent. has been assumed for construction and 50 per cent. for maintenance.

Colonization Roads. Expenditures on colonization roads made by the municipalities themselves have been derived from information supplied by the Department of Highways.

Toronto and Hamilton Highway. The amounts given were taken from answers to the questionnaire furnished by the Department of Highways. Capital expenditures have been arbitrarily divided over a period of four years, while the maintenance expenditures are as actually reported.

Total Expenditures by the Municipalities. From Table 12.3 is seen that for the period January 1, 1889, to March 31, 1937, the total expenditure for capital made by the municipalities on rural roads amounted to \$135,563,505.48; for maintenance, \$83,609,386.23, and for the two types of expenditure \$219,172,891.71.

The total accumulated expenditures by all municipalities on rural roads, as well as the total accumulated capital expenditures alone made by municipalities on rural roads, are indicated graphically in Fig. 5.

12.4—Expenditures by Urban Municipalities. *Need for Considering.* In the opinion of the Commission, the amount and destination of motor vehicle revenue collected by the Province cannot properly be determined without regard to the street systems of the towns and cities.

Much revenue is obtained from vehicles that rarely, if ever, leave the corporation limits of urban municipalities. For this reason there does not appear to be any principle whereby the complete withholding of rebate, subsidy or aid to these municipalities in the matter of their streets or connecting links can be justified.

Without in any way altering the nature or extent of the control enjoyed by the local municipalities over their own streets, it appears necessary in a just appraisal of the situation to consider all revenue earned in respect of the travelled ways, be they rural or urban, in relation to all expenditures made in connection with the facilities provided by the public for the earning of that revenue. Consequently, the Commission believes that some consideration of the capital and annual costs of urban streets is essential for a just and enduring solution of the problem.

The extent to which motor vehicle revenue is earned by vehicles operating on urban streets in Ontario cannot be determined accurately, since no statistics are available with respect to the matter. Some indication may, however, be found in the reported percentages of total travel by motor vehicle owners on urban roads and streets in four of the American States.² For Colorado, it is 36.8 per cent.; for Minnesota, 40.9 per cent.; for New York, 62.7 per cent.; and for Wisconsin, 25.8 per cent. Excluding New York State, for which nearly one-half the urban travel is on the streets of New York City, the average would be 34.5 per cent. It is therefore probable that something like one-third of all motor vehicle travel in Ontario is on the streets or roads of the incorporated urban municipalities. A relatively higher percentage of travel on urban streets than this estimated overall average would obviously exist for those motor vehicle owners resident in urban centres.

Amount of Expenditures on Urban Streets. Due to the fragmentary nature

²Public Roads, April, 1938, p. 17.

of the available statistics relating to the streets in the cities and towns of the Province, it is not possible to make a very accurate determination of their cost. Information collected by the Railway Association of Canada respecting nine cities and towns³ may, however, be used as the basis of an estimate. A dozen representative municipalities were asked by the Association to furnish statements showing their expenditures in detail on streets from 1900 to 1936, but only nine of them had records suitable for the purpose and it was not possible to obtain complete records for all of these for all years. Photostatic copies of all the original documents that were obtained from the nine cities and towns with respect to the matter were furnished to the Commission. These nine, which include 45 per cent. of the total urban population of the Province, were the cities of Toronto, Hamilton, London, Kingston, Guelph, Belleville and Stratford and the towns of Barrie and Lindsay.

Of the nine municipalities, only London and Barrie have what appear to be reasonably complete figures as far back as 1900. Kingston and Guelph have partial information for this period. Data for Stratford and Hamilton are complete from 1910, and Toronto, Lindsay and Belleville from 1915.

The Railway Association's method of computing the urban expenditure on streets and roads was to determine the average per capita cost to the citizens of those cities for which data for any year were available, and assume this average cost to be the average per capita cost for such year for the entire urban population of the Province.

This method gives far too much weight to the figures for Toronto. The population of the nine selected cities and towns varies through the years from 35 per cent. to 45 per cent. of the urban population, and the urban population in the residue includes most of the towns, all of the villages, and no city comparable to Toronto.

The method adopted by the Commission was to estimate the population in the Toronto metropolitan zone in which the standard of roads was the Toronto standard, and the type of development standard with Toronto; to estimate the total population in and adjacent to Ottawa, Hamilton, London and Windsor, over which it was assumed the average costs of Hamilton and London would apply; to obtain the total population in all the cities of the Province between 18,000 and 30,000, for which the average standard of road development, construction and maintenance was assumed to be the average of such in London, Stratford, Guelph, Belleville and Kingston; to obtain the total population of the next group of cities and towns from 18,000 to 5,000, and assume that the average standard of development would be the average of Stratford, Guelph, Kingston, Belleville, Lindsay and Barrie; to obtain the remainder of the urban population of the Province and assume that the average per capita expenditure for it was one-half of that of the group immediately preceding. This assumption is purely empirical, but it allows for the great number of minor towns and villages throughout the Province where road development other than that under provincial or county auspices is rudimentary.

On this basis, the total estimated expenditure on urban streets and roads from 1915 to 1936, both inclusive, was \$133,425,000 for construction and \$60,163,000 for maintenance, not including the cost of sidewalks or lighting. This gave a total of \$193,588,000, which may be compared with the estimates of the Railway Association for the same period of \$172,284,000 for construction and \$72,200,000 for maintenance, with a total of \$244,484,000.

Estimates of urban road or street costs prior to 1915 are more uncertain

³Breed, Older and Downs—Report on Annual Highway Costs, Province of Ontario, February 21, 1938, p. 14.

but a procedure was adopted which gives at least some conception of their magnitude.

For the five-year period 1910-1914, statistics are available for six municipalities only, namely, Hamilton, London, Kingston, Guelph, Stratford and Barrie.

For all cities and towns in excess of 5,000 in population, other than metropolitan Toronto, the average per capita costs of the above six urban centres were deemed to apply. For the Toronto area, and for the towns and villages of less population than 5,000, per capita expenditures were estimated to bear the same ratios to those obtained for the middle group of cities and towns, as were found to apply for the period 1915 to 1936.

For the ten-year period 1900 to 1909, inclusive, statistics of maintenance are available from four places only, namely, London, Kingston, Guelph and Barrie, and of construction expenditures, from London alone. The same method of estimating was used as for the previous five years.

For the years 1889 to 1899, the province-wide per capita expenditures determined for the subsequent decade were used, that is, 43½ cents expenditure per capita for construction and 50 cents per capita for maintenance.

Expenditures on urban streets as above estimated are indicated in Table 12.4, the periods being inclusive of the years defining them.

The expenditures cited in Table 12.4 represent average per capita expenditures per annum over the forty-eight years of \$2.24 for construction and \$1.07 for maintenance.

**Table 12.4—Expenditures on Urban Streets in Ontario,
1889 to 1899, Inclusive**

Years	Construction	Maintenance	Total
1889-1899	\$ 4,131,000	\$ 4,735,000	\$ 8,866,000
1900-1909	9,736,000	6,181,000	15,917,000
1910-1914	18,790,000	8,476,000	27,266,000
1915-1924	62,093,000	23,952,000	86,045,000
1925-1936	71,332,000	36,211,000	107,543,000
	<u>\$166,082,000</u>	<u>\$79,555,000</u>	<u>\$245,637,000</u>

While it is possible that the indicated totals for urban streets should be reduced by \$4,569,488 for construction and \$688,206 for maintenance in order to take account of the payments made towards urban streets by the Department of Highways, both directly or included in the provincial grants to counties, the assumptions made and necessary approximations involved in establishing the above estimate do not warrant attempting such a refinement.

Included in the total shown in Table 12.4 are amounts approximately totaling \$3,638,521 rebated from the counties to various non-separated towns and villages from the county levies for roads which otherwise would be paid for by them, in consideration of expenditures made by such towns and villages on their own streets. Of the amount of the rebate, \$3,004,010 was in consideration of construction expenditure and \$634,511 in consideration of maintenance and administration expenditures. Such rebates representing county expenditures are included with rural road expenditures in Tables 12.7 and 12.8.

The magnitudes of the total accumulated expenditures and of the capital expenditures only made by the urban municipalities of the Province on their streets and roads are indicated in Fig. 5.

The totals as shown are about 12½ per cent. less than the estimates made by the Railway Association of Canada, which were: construction \$194,231,000; maintenance \$87,135,000; total \$281,366,000.

Relative Total Expenditures on Urban Streets and Rural Roads. It is of interest to compare these expenditures in general amount with the more authentic figures of municipal expenditures on rural roads for the period January 1, 1889, to March 31, 1937, namely:

Construction	\$135,563,505.48
Maintenance	83,609,386.23
Total	<u>\$219,172,891.71</u>

The amounts are approximately equal, but no comparison of urban and rural per capita expenditures can be directly drawn, as all classes of municipalities have contributed to rural roads.

Comparison of Estimated and Known Maintenance Expenditures. It is informing to compare the per capita expenditures for maintenance averaged over five-year periods for the urban population of the Province as a whole, as developed from the above estimates, with the actual figures for the various cities for which data are available. This is done in Table 12.5. Lighting, sidewalks and highways outside the municipal limits are not included in these expenditures.

The reasonable uniformity of maintenance costs is worthy of note. From the scanty information available, it would appear that maintenance costs at the beginning of the century ran about 50 cents per capita, increasing rapidly after 1905 so as to range between \$1.00 and \$2.00 per capita, with a fairly consistent average of \$1.50, or slightly under, from 1910 to 1934.

Comparison of Estimated and Known Capital Expenditures. Great variation in capital expenditures is shown by the corresponding data for such, as presented in Table 12.6.

Table 12.5—Annual Per Capita Expenditure in Dollars on Maintenance of Urban Streets and Roads for Various Periods

Years	Province	Toronto	Hamilton	London	Guelph	Kings-ton	Belleville	Stratford	Barrie	Lindsay
1900-1904 ..	0.50	...	...	0.84	0.32	0.21	...	...	0.51	...
1905-1909 ..	0.64	...	...	1.00	0.45	0.28	...	...	0.59	...
1910-1914 ..	1.24	...	1.81	1.25	0.79	0.41	...	0.83	0.90	0.07
1915-1919 ..	1.21	1.75	1.61	1.47	0.79	0.51	0.19	0.97	1.54	0.42
1920-1924 ..	1.67	2.27	1.95	2.21	1.12	0.86	0.71	1.20	2.96	0.53
1925-1929 ..	1.62	2.02	1.68	2.35	1.64	0.85	1.38	1.16	1.72	0.67
1930-1934 ..	1.44	1.77	1.17	2.10	1.45	1.07	1.91	0.98	1.69	0.66
1935-1936 ..	1.18	1.23	0.64	2.24	1.06	1.11	1.36	1.18	1.26	0.76

Table 12.6—Annual Capital Expenditures in Dollars Per Capita on Urban Streets and Roads for Various Periods

Years	Province	Toronto	Hamilton	London	Guelph	Kings-ton	Belleville	Stratford	Barrie	Lindsay
1900-1904 ..	0.435	...	...	0.42	...	...	...	...	...	...
1905-1909 ..	1.30	...	...	1.20	4.02	...	...	...	...	...
1910-1914 ..	2.75	...	3.30	1.00	1.85	2.25	4.79	3.31	0.80	3.33
1915-1919 ..	1.79	3.12	0.92	1.87	1.01	1.52	0.48	0.87	0.22	3.58
1920-1924 ..	5.52	7.09	3.22	3.62	6.96	4.88	10.40	8.75	...	6.58
1925-1929 ..	3.48	5.09	4.17	1.81	2.12	5.54	1.02	1.91	6.68	1.59
1930-1934 ..	3.19	5.68	4.16	0.66	1.34	2.58	3.89	0.49	1.68	1.22
1935-1936 ..	0.81	1.26	0.81	0.96	...	0.05	0.06	0.01	2.64	...

Recession in construction expenditures during the war years 1915-1919 is generally evident from Table 12.6, as is the great upsurge of construction in the five years immediately following. If these are balanced against each other, and there is some reason for so doing, it will be seen that capital expenditure on urban streets was not far removed from \$3.50 per capita per year from 1910 to 1934. The peaks of spending have been as great in the smaller places as in the larger.

12.5—Summary of Total Provincial and Municipal Expenditures on Public Roads and Streets of the Province. *Capital Expenditure.* Capital expenditures made by the various departments of the Government of Ontario for rural roads and those made by the municipalities for rural roads on the one hand and for urban streets on the other, are indicated in Table 12.7 for the period January 1, 1889, to March 31, 1937. The provincial expenditure includes relatively small amounts expended on connecting links in non-separated towns and villages, while municipal expenditures on rural roads includes certain like expenditures of somewhat lesser amounts. Subject to such, the total capital expenditure for rural roads made by all bodies in the Province amounted to \$398,108,173.77, while for rural roads and urban streets, considered together, it was \$564,190,173.77.

Maintenance and Administration. Total expenditures made for maintenance and administration on highways and urban streets of Ontario by the departments of the provincial government and by the municipalities are indicated for the same period in Table 12.8. For rural roads alone, all spending bodies in the Province paid \$172,445,351.09, while for rural roads and urban streets considered together the amount was \$252,000,351.09.

Grand Totals. The grand totals of expenditures for construction, maintenance and administration made on the highways and urban streets of Ontario, excluding Dominion subsidies and private subscriptions, for the period 1889-1937 as defined are shown in Table 12.9. For construction the amount was \$564,190,173.77; for maintenance and administration it was \$252,000,351.09; while for construction, maintenance and administration together it was \$816,190,524.86.

12.6—Comparison of Expenditures on Rural Roads and Urban Streets. It is informing to compare the total expenditures on urban streets with the expenditures on rural roads by townships and counties. In the case of the rural highways these were for substantially the same period as that comprised in Table 12.3 for urban streets, namely for the calendar years 1889-1936. During the eleven years 1889 to 1899, inclusive, expenditures on rural roads were made almost wholly by the townships, and were as follows:

Construction	\$ 8,259,649
Maintenance	11,947,700

If these amounts are averaged over the entire rural population, it is found that the per capita expenditure is 59 cents per annum on construction and 85 cents on maintenance, the last being represented by statute labour calculated at one dollar per day per man.

The average expenditure per capita per annum on the urban streets of the Province for the period 1889-1899, derived as described in Art. 12.4 and as used for developing Table 12.3, was 43½ cents for construction and 50 cents for maintenance. These amounts may be compared with the corresponding figures of 59 and 85 cents, respectively, for rural roads.

Table 12.7—Summary of Total Capital Expenditure Made on the Highways and Urban Streets of Ontario, Excluding Dominion Subsidies and Private Subscriptions, From January 1, 1889, to March 31, 1937

Fiscal Year Ending	By Departments of the Provincial Government For	BY THE MUNICIPALITIES		TOTALS	
	Rural Roads (a)	For Rural Roads (b)	For Urban Streets (Estimated)	For Rural Roads	For Rural Roads and Urban Streets
Dec. 31, 1889	\$61,959.98	\$680,687.00	\$360,000	\$742,646.98	\$1,102,646.98
1890	75,139.96	779,044.00	360,000	854,183.96	1,214,183.96
1891	58,987.39	759,218.00	360,000	818,205.39	1,178,205.39
1892	62,193.24	742,491.00	360,000	804,684.24	1,164,684.24
1893	67,299.78	806,508.00	360,000	873,807.78	1,233,807.78
1894	70,127.87	795,393.00	367,000	865,520.87	1,232,520.87
1895	73,023.95	640,184.00	370,000	713,207.95	1,083,207.95
1896	63,631.54	695,033.00	380,000	758,664.54	1,138,664.54
1897	56,027.46	706,023.00	390,000	762,050.46	1,152,050.46
1898	64,472.57	773,898.00	404,000	838,370.57	1,242,370.57
1899	54,278.45	881,170.00	420,000	935,448.45	1,355,448.45
1900	80,355.66	895,014.00	420,000	975,369.66	1,395,369.66
1901	94,780.83	967,595.00	420,000	1,062,375.83	1,482,375.83
1902	126,347.64	1,005,204.64	420,000	1,131,552.28	1,551,552.28
1903	152,688.31	1,250,076.00	420,000	1,402,764.31	1,822,764.31
1904	253,436.62	1,438,854.00	437,000	1,692,290.62	2,129,290.62
1905	191,316.99	1,336,342.00	500,000	1,527,658.99	2,027,658.99
1906	273,361.81	1,599,751.09	1,000,000	1,873,112.90	2,873,112.90
1907	368,963.64	1,635,270.00	1,500,000	2,004,233.64	3,504,233.64
1908	495,868.60	1,708,036.00	2,000,000	2,203,904.60	4,203,904.60
Oct. 31, 1909	494,664.25	1,575,414.00	2,619,000	2,070,078.25	4,689,078.25
1910	499,816.38	1,665,794.59	3,250,000	2,165,610.97	5,415,610.97
1911	612,402.51	1,759,159.02	4,000,000	2,371,561.53	6,371,561.53
1912	905,466.18	1,894,617.50	5,000,000	2,800,083.68	7,800,083.68
1913	1,697,294.57	2,001,163.80	3,900,000	3,698,458.37	7,598,458.37
1914	1,416,924.26	1,906,495.32	2,640,000	3,323,419.58	5,963,419.58
1915	957,197.29	1,429,368.71	1,300,000	2,386,566.00	3,686,566.00
1916	930,139.57	1,542,910.39	1,900,000	2,473,049.96	4,373,049.96
1917	991,502.11	1,756,673.16	2,600,000	2,748,175.27	5,348,175.27
1918	1,374,920.73	2,325,324.35	3,500,000	3,700,245.08	7,200,245.08
1919	3,414,451.88	3,149,490.96	4,596,000	6,563,942.84	11,159,942.84
1920	8,204,701.09	4,031,213.39	7,500,000	12,235,914.48	19,735,914.48
1921	12,434,007.65	6,407,363.68	10,000,000	18,841,371.33	28,841,371.33
1922	15,407,996.80	6,360,943.38	11,697,000	21,768,940.18	33,465,940.18
1923	20,308,244.28	4,807,873.61	10,500,000	25,116,117.89	35,616,117.89
1924	6,821,976.37	6,001,826.36	8,500,000	12,823,802.73	21,323,802.73
1925	6,273,489.65	8,154,398.23	6,900,000	14,427,887.88	21,327,887.88
1926	8,887,423.22	5,381,185.07	6,100,000	14,268,608.29	20,368,608.29
1927	11,108,839.15	6,044,421.15	5,883,000	17,153,260.30	23,036,260.30
1928	13,779,254.99	7,175,553.98	6,100,000	20,954,808.97	27,054,808.97
1929	16,363,901.56	8,025,296.33	8,800,000	24,389,197.89	33,189,197.89
1930	18,748,342.41	8,578,566.11	11,500,000	27,326,908.52	38,826,908.52
1931	18,970,324.76	6,447,363.76	10,536,000	25,417,688.52	35,953,688.52
1932	16,355,047.75	4,872,090.84	6,500,000	21,227,138.59	27,727,138.59
1933	6,567,157.54	3,815,599.93	3,250,000	10,382,757.47	13,632,757.47
1934	32,558,490.83	3,419,409.93	2,250,000	35,977,900.76	38,227,900.76
Mar. 31, 1935	11,561,883.52	1,038,389.39	...	12,600,272.91	12,600,272.91
1936	13,937,497.31	2,539,605.53	1,750,000 (c)	16,477,102.84	18,227,102.84
1937	8,217,047.39	1,360,201.28	1,763,000 (d)	9,577,248.67	11,340,248.67
Total	\$262,544,668.29	\$135,563,505.48	\$166,082,000	\$398,108,173.77	\$564,190,173.77
Jan. 1, 1889, to Oct. 31, 1918	\$ 12,624,590.14	\$ 37,952,712.57	\$ 41,957,000	\$ 50,577,302.71	\$ 92,534,302.71
Nov. 1, 1918, to Mar. 31, 1937	\$249,920,078.15	\$ 97,610,792.91	\$124,125,000	\$347,530,871.06	\$471,655,871.06

Notes:

Rural Roads include roads of every character outside the limits of urban municipalities.

Expenditures by the Provincial Government are for fiscal years; by Municipalities for calendar years. The total closely represents the cost of physical work performed up to December 31, 1936.

- (a) This includes relatively small amounts expended on connecting links in non-separated towns and villages, totalling \$4,569,488.71.
- (b) This includes \$3,004,010 rebated by the counties to various non-separated towns and villages from county levies in consideration of expenditures made by them on their own streets.
- (c) For Calendar Year 1935.
- (d) For Calendar Year 1936.

As towns, villages and cities to some extent contribute to both rural and urban roads, it is impossible directly to compare the exact expenditure per capita made by rural residents, town residents, or city dwellers, subsequent to 1902.

The total municipal expenditure for roads, both urban and rural, in the past forty-eight years has been, from the above estimates:

Construction	\$301,645,505.48
Maintenance	163,164,386.23
Total	\$464,809,891.71

or an average expenditure per capita per annum of \$2.17 for construction and \$1.18 for maintenance.

Since the expenditures per capita on urban streets have averaged during the same period in the neighbourhood of \$2.24 per annum for construction and \$1.07 for maintenance, it would appear that the total municipal expenditures per capita per annum on rural roads have been slightly in excess of municipal expenditures on urban streets, namely, \$3.40 as against \$3.31. As has already been stated, there have been included in the cost of rural roads relatively small amounts, not in excess of 2 per cent. of the total, paid towards roads in non-separated towns and villages. While towns, villages and cities have subscribed substantial amounts to rural roads, such contribution is not readily determinable on a per capita basis. That urban and rural expenditures through half a century have run so close on a per capita basis is remarkable.

12.7—Relation of Total Expenditure to Total Revenue. In Table 12.10 the total revenue collected by the Province in respect of motor vehicles is shown for the period ending March 31, 1938, and this is also indicated graphically in Fig 5(A). The collection of revenue began with the institution of licensing in 1903.

In the main portion of Fig. 5 the relation of the various classes of expenditure to revenue received by the Province is graphically indicated. It is seen from the roughly parallel trends of the curves of provincial revenue and provincial expenditure, and particularly from Table 12.15, that while annual revenue during the past ten years has amounted to about 84 per cent. of the total annual expenditure on a cash basis, no retirement of previous capital expenditure has been possible, nor, on this basis, have revenues been available to meet interest on the debt occasioned thereby. In the insert Fig. 5(A) the relation of revenue to total accumulated expenditure and to the capital expenditure only made by all public authorities in the Province is shown.

Table 12.8—Summary of Total Expenditure for Maintenance and Administration Made on the Highways and Urban Streets of Ontario, Excluding Dominion Subsidies and Private Subscriptions, From January 1, 1889, to March 31, 1937

Fiscal Year Ending	By Departments of the Provincial Government For	BY THE MUNICIPALITIES		TOTALS	
	Rural Roads (a)	For Rural Roads (b)	For Urban Streets (Estimated)	For Rural Roads	For Rural Roads and Urban Streets
Dec. 31, 1889	\$41,306.65	\$1,100,000.00	\$400,000	\$1,141,306.65	\$1,541,306.65
1890	50,093.30	1,100,000.00	400,000	1,150,093.30	1,550,093.30
1891	39,324.92	1,100,000.00	400,000	1,139,324.92	1,539,324.92
1892	41,462.15	1,100,000.00	420,000	1,141,462.15	1,561,462.15
1893	44,866.52	1,100,000.00	420,000	1,144,866.52	1,564,866.52
1894	46,751.91	1,100,000.00	437,000	1,146,751.91	1,583,751.91
1895	46,682.64	1,100,000.00	450,000	1,146,682.64	1,596,682.64
1896	41,087.70	1,094,700.00	450,000	1,135,787.70	1,585,787.70
1897	37,351.64	1,051,000.00	450,000	1,088,351.64	1,538,351.64
1898	42,981.72	1,051,000.00	450,000	1,093,981.72	1,543,981.72
1899	36,185.64	1,051,000.00	458,000	1,087,185.64	1,545,185.64
1900	53,570.44	1,051,000.00	470,000	1,104,570.44	1,574,570.44
1901	55,520.55	1,051,000.00	480,000	1,106,520.55	1,586,520.55
1902	78,498.43	1,051,000.00	490,000	1,129,498.43	1,619,498.43
1903	69,999.17	1,051,000.00	500,000	1,120,999.17	1,620,999.17
1904	75,398.30	1,051,000.00	505,000	1,126,398.30	1,631,398.30
1905	76,712.71	1,051,000.00	550,000	1,127,712.71	1,677,712.71
1906	95,696.61	1,100,000.00	625,000	1,195,696.61	1,620,696.61
1907	135,798.49	1,100,000.00	725,000	1,235,798.49	1,960,798.49
1908	193,909.67	1,154,459.00	825,000	1,348,368.67	2,173,368.67
Oct. 31, 1909	189,538.38	1,271,609.00	1,011,000	1,461,147.38	2,472,147.38
1910	191,759.13	1,281,760.00	1,400,000	1,473,519.13	2,873,519.13
1911	190,940.08	1,272,962.00	1,700,000	1,463,902.08	3,163,902.08
1912	191,175.79	1,280,353.00	2,200,000	1,471,528.79	3,671,528.79
1913	233,266.23	1,417,645.00	1,700,000	1,650,911.23	3,350,911.23
1914	293,379.10	1,357,732.00	1,476,000	1,651,111.10	3,127,111.10
1915	192,606.83	872,260.00	1,200,000	1,064,866.83	2,264,866.83
1916	284,541.90	898,533.00	1,600,000	1,183,074.90	2,783,074.90
1917	477,729.66	1,070,133.39	1,800,000	1,547,863.05	3,347,863.05
1918	451,977.46	1,159,597.99	2,200,000	1,611,575.45	3,811,575.45
1919	1,104,250.02	1,818,036.62	2,585,000	2,922,286.64	5,507,286.64
1920	1,613,902.44	2,111,944.22	2,700,000	3,725,846.66	6,425,846.66
1921	1,639,005.66	3,164,356.37	2,800,000	4,803,362.03	7,603,362.03
1922	1,786,527.92	2,848,408.92	2,900,000	4,634,936.84	7,534,936.84
1923	4,150,896.39	2,855,876.19	3,000,000	7,006,772.58	10,006,772.58
1924	3,611,341.33	3,228,441.55	3,167,000	6,839,782.88	10,006,782.88
1925	3,997,007.28	2,776,600.59	3,200,000	6,773,607.87	9,973,607.87
1926	4,362,501.83	2,603,667.80	3,150,000	6,966,169.63	10,116,169.63
1927	5,529,949.62	3,210,108.99	3,100,000	8,740,058.61	11,840,058.61
1928	5,970,989.67	3,463,028.67	3,100,000	9,434,018.34	12,534,018.34
1929	6,070,938.58	3,581,649.77	3,160,000	9,652,588.35	12,812,588.35
1930	7,045,872.60	3,220,050.64	3,100,000	10,265,923.24	13,365,923.24
1931	6,459,748.40	2,974,422.52	3,100,000	9,434,170.92	12,534,170.92
1932	6,097,485.21	2,639,222.17	3,100,000	8,736,707.38	11,836,707.38
1933	4,441,687.17	2,032,208.93	3,100,000	6,473,896.10	9,573,896.10
1934	5,716,573.10	2,732,684.84	3,003,000	8,449,257.94	11,452,257.94
Mar. 31, 1935	2,714,711.96	2,392,369.35	...	5,107,081.31	5,107,081.31
1936	6,326,338.82	2,157,045.78	2,500,000 (c)	8,483,384.60	10,983,384.60
1937	6,196,123.14	308,517.93	2,598,000 (d)	6,504,641.07	9,102,641.07
Total:	\$88,835,964.86	\$83,609,386.23	\$79,555,000	\$172,445,351.09	\$252,000,351.09

Jan. 1, 1889, to

Oct. 31, 1918 \$ 4,000,113.72 \$33,490,744.38 \$26,192,000 \$ 37,490,858.10 \$ 63,682,858.10

Nov. 1, 1918, to

Mar. 31, 1937 \$84,835,851.14 \$50,118,641.85 \$53,363,000 \$134,954,492.99 \$188,317,492.99

Notes:

Rural Roads include roads of every character outside the limits of urban municipalities.

Expenditures by the Provincial Government are for fiscal years; by Municipalities for calendar years. The total closely represents the cost of physical work performed up to December 31, 1936.

- (a) This includes relatively small amounts expended on connecting links in non-separated towns and villages, totalling \$688,206.16.
- (b) This includes \$634,511 rebated by the counties to various non-separated towns and villages from county levies in consideration of expenditures made by them on their own streets.
- (c) For calendar year 1935.
- (d) For calendar year 1936.

12.8—Dominion Government Expenditure on Ontario Roads.

Dominion Government expenditure on the roads in Ontario has taken four forms, three of which are indicated in Table 12.1. The four are:

(1) Direct subsidies under the Canada Highways Act, which in the years 1921 to 1927, inclusive, amounted to \$5,887,283.28.

(2) Subsidies by way of unemployment relief in the years 1931 to 1937 totalling \$19,863,899.66.⁴ This amount was directly spent on roads, largely on the Trans-Canada Highway, and directly under the supervision of Departments of the Ontario Government.

(3) Grants of part of the labour cost of works undertaken by municipalities, an indeterminate portion of which was urban road construction.

(4) Grants through the Grade Crossing Fund toward the protection or elimination of highway-railway grade crossings. The Public Accounts of Ontario show, as of March 31, 1937, \$465,069.92⁵ so received in connection with the reduction of grade crossings on the King's Highways.

The Commission has not considered the question of Dominion taxation on motor vehicles, or on road materials, or on road construction or motor transport businesses, these being deemed to be outside the Reference and the jurisdiction of the Ontario Government. Similarly, it has not included any grants received from the Dominion Government in any determination of the costs to be borne by the people of Ontario in respect of roads. It should be pointed out, however, that of any grant made by the federal authority the people of Ontario provide nearly one-half. This is evident from the fact that the percentage of total Dominion revenue obtained from the Province of Ontario in 1936-37, according to the statement by the Government of Ontario to the Royal Commission on Dominion-Provincial Relations, was 45.3 per cent.⁶

Exclusive of the amount spent for unemployment relief, the sums received from the Dominion Government have been relatively small. With respect to the grants for unemployment relief, and particularly with respect to matters discussed in Chapt. XIII, the Commission regards Dominion grants on unemployment relief as more than offsetting any monetary waste occasioned by constructing roads by relief labour. Accordingly, it has been assumed that for the net Ontario Government expenditure on roads to date, full value has been obtained in the road work done, and that no part of such expenditure is chargeable differently from any other part.

⁴\$21,258,495.40 to March 31, 1938.

⁵\$583,777.16 to March 31, 1938.

⁶Book 2, p. 18.

SECTION 2—HIGHWAY DEBT OF ONTARIO

12.9—Capital Expenditure Not Debt. Although obviously a proper estimate of the annual cost of the highways in the Province must necessarily include interest on money borrowed to carry on road programmes, it is not possible to determine with precision the principal sum. No part of the public debt of Ontario is ear-marked as highway debt and money borrowed for highway or any other purposes is against the general credit of the Province. Moreover, the municipal debt in respect of roads and streets should properly be included. Determination of this, apart from the \$15,526,327 stated to be owing by the counties for county roads and King's Highways as of December 31, 1933,⁷ would be difficult if not impossible.

Frequently, but quite erroneously, the highway debt of Ontario has been assumed as identical with the highway assets of the Province reported in The Public Accounts since 1919. In that year an asset was shown, entitled "Capital Expenditures on Development Account in Fiscal Year to October 31, 1919," aggregating \$3,223,550.17, and identified as Northern Development, Improvement to Highways and Colonization Roads. Certain minor assets not pertaining to roads were included.

For the fiscal year ending March 31, 1938, in the statement of the investment of the provincial debt there is included as a revenue-producing but not realizable asset an item for roads and highways of \$262,169,103.99, which, on deducting an amount of \$434,627.10 as due by cities, counties and the Dominion Government, leaves a net amount of \$261,734,476.89.⁸ The gross amount is itemized in a statement headed "Buildings, Roads, *Etc.*, as at March 31, 1938," as follows:⁹

Improvements to Highways, 1919-1938	\$189,834,792.89
Northern Development—Roads and Farms 1919-1937	47,255,590.88
Colonization Roads, 1919-1937	5,714,974.31
Secondary Trunk and Unorganized Territory Roads, (1938)	4,223,126.51
Trans-Canada Highways, 1930-1937	15,140,619.40
	<u>\$262,169,103.99</u>

Similar, but somewhat different, amounts have been reported as the funded highway debt of Ontario by the Dominion Bureau of Statistics in The Canada Year Book since 1931.

Obviously, these amounts do not represent debt at all. They merely represent capital expenditures on highways for the various periods indicated in The Public Accounts. No addition of interest is made for the unamortized portion and no credits are allowed for revenue derived from licence fees, permits and the motor fuel tax.

⁷Annual Report of the Department of Highways, 1933-34, p. 47.

⁸The Public Accounts of Ontario for the Year Ended March 31, 1938, p. 42.

⁹*Ibid.*, p. 47.

Table 12.9—Grand Totals of Expenditures for Construction, Maintenance and Administration Made on the Highways and Urban Streets of Ontario, Excluding Dominion Subsidies and Private Subscriptions, From January 1, 1889, to March 31, 1937

Fiscal Year Ending	Construction	Maintenance and Administration	Total
Dec. 31, 1889	\$1,102,646.98	\$1,541,306.65	\$2,643,953.63
1890	1,214,183.96	1,550,093.30	2,764,277.26
1891	1,178,205.39	1,539,324.92	2,717,530.31
1892	1,164,684.24	1,561,462.15	2,726,146.39
1893	1,233,807.78	1,564,866.52	2,798,674.30
1894	1,232,520.87	1,583,751.91	2,816,272.78
1895	1,083,207.95	1,596,682.64	2,679,890.59
1896	1,138,664.54	1,585,787.70	2,724,452.24
1897	1,152,050.46	1,538,351.64	2,690,402.10
1898	1,242,370.57	1,543,981.72	2,786,352.29
1899	1,355,448.45	1,545,185.64	2,900,634.09
1900	1,395,369.66	1,574,570.44	2,969,940.10
1901	1,482,375.83	1,586,520.55	3,068,896.38
1902	1,551,552.28	1,619,498.43	3,171,050.71
1903	1,822,764.31	1,620,999.17	3,443,763.48
1904	2,129,290.62	1,631,398.30	3,760,688.92
1905	2,027,658.99	1,677,712.71	3,705,371.70
1906	2,873,112.90	1,820,696.61	4,693,809.51
1907	3,504,233.64	1,960,798.49	5,465,032.13
1908	4,203,904.60	2,173,368.67	6,377,273.27
Oct. 31, 1909	4,689,078.25	2,472,147.38	7,161,225.63
1910	5,415,610.97	2,873,519.13	8,289,130.10
1911	6,371,561.53	3,163,902.08	9,535,463.61
1912	7,800,083.68	3,671,528.79	11,471,612.47
1913	7,598,458.37	3,350,911.23	10,949,369.60
1914	5,963,419.58	3,127,111.10	9,090,530.68
1915	3,686,566.00	2,264,866.83	5,951,432.83
1916	4,373,049.96	2,783,074.90	7,156,124.86
1917	5,348,175.27	3,347,863.05	8,696,038.32
1918	7,200,245.08	3,811,575.45	11,011,820.53
1919	11,159,942.84	5,507,286.64	16,667,229.48
1920	19,735,914.48	6,425,846.66	26,161,761.14
1921	28,841,371.33	7,603,362.03	36,444,733.36
1922	33,465,940.18	7,534,936.84	41,000,877.02
1923	35,616,117.89	10,006,772.58	45,622,890.47
1924	21,323,802.73	10,006,782.88	31,330,585.61
1925	21,327,887.88	9,973,607.87	31,301,495.75
1926	20,368,608.29	10,116,169.63	30,484,777.92
1927	23,036,260.30	11,840,058.61	34,876,318.91
1928	27,054,808.97	12,534,018.34	39,588,827.31
1929	33,189,197.89	12,812,588.35	46,001,786.24
1930	38,826,908.52	13,365,923.24	52,192,831.76
1931	35,953,688.52	12,534,170.92	48,487,859.44
1932	27,727,138.59	11,836,707.38	39,563,845.97
1933	13,632,757.47	9,573,896.10	23,206,653.57
1934	38,227,900.76	11,452,257.94	49,680,158.70
Mar. 31, 1935	12,600,272.91	5,107,081.31	17,707,354.22
1936	18,227,102.84	10,983,384.60	29,210,487.44
1937	11,340,248.67	9,102,641.07	20,442,889.74
Total	\$564,190,173.77	\$252,000,351.09	\$816,190,524.86
Jan. 1, 1889, to Oct. 31, 1918	\$ 92,534,302.71	\$ 63,682,858.10	\$156,217,160.81
Nov. 1, 1918, to March 31, 1937	\$471,655,871.06	\$188,317,492.99	\$659,973,364.05

12.10—Computed Highway Debt, 1903-1938. In the opinion of the Commission the only procedure by which an adequate conception of the highway debt can now be built up is to consider the relation of highway revenues to net expenditures. Interest cannot be neglected, for it is an inescapable burden on any body attempting road work on the deferred-payment plan. On this principle the Commission has proceeded to establish what appears to be a reasonable basis for the capital charges that must be included in the annual cost of the highways to the Province. Highway debt incurred by the municipalities, for which only fragmentary information is available, has had to be neglected.

There is much to be said in favour of considering only that portion of the debt that has accumulated since November 1, 1918. Fig. 5 shows very clearly that the enlarged road programme consequent upon the intensified use of motor vehicles at the close of the war entailed a sudden jump in highway expenditure, so that they greatly exceeded the revenue collected. The motor vehicle era for Ontario may be said to have commenced in earnest with the year 1919.

Some justification may be found for beginning debt accumulation with the year 1915. In that year motor vehicle licence fees were raised to a revenue basis and the highway activities of the Province began to assume some of the aspects of a business.

Ground may also be found for going back still further. Having regard to the acceleration of effort in highway building that followed the passing of The Highway Improvement Act of 1901, and the revolutionary changes that flowed from the introduction of the motor vehicle, debt calculations might with some justification begin with the year 1903. In that year money was first expended by the Government under its new road policy and, moreover, it was the first year in which motor vehicles were licensed and a revenue from them obtained. The beginning of 1903 might thus appear to be a reasonable date at which to begin the accumulation of highway expenditures and the consideration of debt. It is the first year for which any highway revenue is available to set off against expenditure, and consequently the first one for which the appraisal of highway activities in the light of a business can be entertained.

In order to exhibit the debt situation from the various points of view outlined above, Tables 12.11, 12.12 and 12.13 have been prepared. Table 12.11 shows the growth of debt incurred by the Province from November 1, 1918, to March 31, 1938; Table 12.12 the growth from November 1, 1915, to October 31, 1918, and the amount so incurred accumulated to March 31, 1938; and Table 12.13 the growth from January 1, 1903, to October 31, 1918, also accumulated to March 31, 1938.

In the determination of annual capital charges it is important that the rate of interest be assumed in accordance with that obtaining when the debt was incurred. Messrs. Breed, Older and Downs¹⁰ adopted a rate of 4.55 per cent. in their calculation of provincial highway debt incurred from 1919 to 1936, inclusive, this being the weighted average of the interest rates which the public debt of Ontario carried in the issues for this period. While over longer periods the average interest rate was lower than this, it is nearer to 5 per cent. over the past twenty years, when the effective rate is considered, that is, after allowance for bond discount and other costs of financing has been made. The effective rate being paid on all Ontario Government issues as of June 2, 1938,

¹⁰Report on Annual Highway Costs, Province of Ontario, February 21, 1938, p. 20.

was 4.535 per cent., after a very considerable amount of refinancing had been done at 3 per cent.

Having regard to these circumstances, and also to the desirability of selecting a rate that might be continued for some time in estimates of highway debt, the Commission has adopted a rate of $4\frac{1}{2}$ per cent.

The concept upon which Tables 12.11, 12.12, 12.13 and 12.14 have been built up is that all excess revenue above net ordinary expenditure and interest requirements is invested as a sinking fund accumulation in the securities issued to provide funds for capital expenditures and that interest accruing on such investment is reinvested in the same way. Correspondingly, all deficiencies between revenue and the net ordinary expenditure and interest requirements are assumed to be made up by borrowing, interest payable on such overdrafts or loans being added to the obligation.

In consequence, it has been assumed that all monies required for capital expenditure are obtained by the issue of debentures at $4\frac{1}{2}$ per cent. interest; that interest on such requirement in any year is computed on the whole amount for six months and that the total interest charged for any one year is this amount plus a full year's interest on the total capital expenditure incurred up to the close of the previous fiscal year; that interest for six months is credited on the total surplus accruing in any year; and that interest is correspondingly charged on any overdraft or loan secured in order to meet a deficiency of revenue in any year.

The net highway debt in accordance with this concept is thus simply the accumulated shortages less all accumulations of surpluses, interest being included in each case.

Net capital expenditure by the Province, as shown in the tables mentioned, is the expenditure on all classes of roads and bridges, after all refunds on capital account from municipalities have been made, and exclusive of Dominion or other grants and subsidies.

Net ordinary expenditure is expenditure by the Province on maintenance, administration, highway patrol, *etc.*, after deducting all refunds on ordinary account (such as refunds on cement bags, sale of materials, payment for incidental work performed, rental of equipment, *etc.*), after deducting minor receipts under departmental regulations respecting signs, gasoline station permits, *etc.*, interest on bank balances, and refunds from municipalities of their share of King's Highway maintenance.

Net ordinary revenue is limited to receipts from motor vehicle licences and tax. All other incidental revenue has been deducted from expenditure to obtain the net ordinary expenditure indicated in the tables.

Table 12.15 indicates the relation of total annual revenues to total annual expenditure made by the Province for the fiscal years 1919 to 1938, inclusive, and, correspondingly, the manner in which the present highway debt has developed.

Table 12.10—Revenue Derived by the Province of Ontario from Licences, Permits, Fuel Tax and Other Fees Relating to Motor Vehicles and Their Operation

Fiscal Year Ending	Motor Vehicle Licences			All Other Permits, Licences and Fees	Fuel Tax	Total Revenue
	Passenger Cars	All Other Motor Vehicles and Trailers	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dec. 31, 1903	...	...	\$ 710.00	...	...	\$ 710.00
1904	...	...	1,282.00	...	...	1,282.00
1905	...	...	3,096.65	...	...	3,096.65
1906	...	...	5,523.15	...	...	5,523.15
1907	...	...	8,098.50	...	...	8,098.50
1908	...	...	10,007.75	...	...	10,007.75
Oct. 31, 1909	...	...	12,418.75	...	...	12,418.75
1910	...	...	24,394.01	...	...	24,394.01
1911	...	...	50,831.22	...	...	50,831.22
1912	...	...	73,255.96	...	...	73,255.96
1913	...	...	105,558.95	...	...	105,558.95
1914	...	...	149,210.45	...	...	149,210.45
1915	...	...	334,759.78	...	...	334,759.78
1916	...	...	639,987.09	...	...	639,987.09
1917	...	...	930,753.00	...	...	930,753.00
1918	...	...	1,214,093.87	...	...	1,214,093.87
1919	...	...	1,580,105.61	...	...	1,580,105.61
1920	...	...	1,990,833.38	...	...	1,990,833.38
1921	...	...	2,945,360.36	...	...	2,945,360.36
1922	...	...	3,477,430.13	...	...	3,477,430.13
1923	\$3,596,097.35	\$ 611,349.15	4,207,446.50	\$ 88,562.82	...	4,296,009.32
1924	3,969,879.91	657,651.69	4,627,531.60	157,703.53	...	4,785,235.13
1925	4,441,348.02	911,298.89	5,352,646.91	286,346.47	\$ 1,974,434.10	7,613,427.48
1926	4,972,247.97	1,083,982.37	6,056,230.34	359,482.71	3,376,090.56	9,791,803.61
1927	3,755,222.69	1,328,070.17	5,083,292.86	881,570.77	4,032,941.72	9,997,805.35
1928	4,258,331.60	1,535,908.55	5,794,240.15	675,911.64	4,607,379.75	11,077,531.54
1929	4,886,523.05	1,786,161.50	6,672,684.55	1,175,764.03	8,497,593.94	16,346,042.52
1930	2,881,890.75	1,506,221.00	4,388,111.75	1,159,142.83	10,756,835.83	16,304,090.41
1931	2,962,085.95	1,545,793.70	4,507,879.65	1,102,563.15	10,950,645.39	16,561,088.19
1932	4,289,695.40	1,992,431.75	6,282,127.15	1,094,545.58	12,341,237.78	19,717,910.51
1933	4,273,509.10	2,099,790.15	6,373,299.25	1,047,860.59	12,629,056.88	20,050,216.72
1934	4,582,800.56	2,347,933.47	6,930,734.03	1,118,979.97	12,961,343.55	21,011,057.55
Mar. 31, 1935	3,581,745.50	1,982,082.20	5,563,827.70	574,979.42	4,789,718.72	10,928,525.84
1936	5,145,026.15	2,687,855.55	7,832,881.70	1,311,383.07	15,021,993.70	24,166,258.47
1937	6,154,894.45	3,258,530.03	9,413,424.48	1,503,066.60	15,764,158.33	26,680,649.41
1938	4,187,684.25	2,943,684.97	7,131,369.22	1,636,320.02	17,644,164.47	26,411,853.71

SECTION 3—ANNUAL COST OF THE HIGHWAYS

12.11—General. While the Commission does not consider that under the Reference it is called upon to suggest a detailed road policy for the Province, it is necessary, if annual road costs are to be appraised properly, that the expenditures be considered in relation to the plan that is apparently followed at the present time or any other plan that might conceivably be adopted in the near future.

It is, of course, obvious that the computed annual cost of the public roads of the Province will depend upon the plan of financing that is followed. It is one thing if roads are built on a deferred-payment plan and another if the programme is one of "pay as you go." It will depend on whether capital borrowings are repaid on the basis of an arbitrary amortization period or whether the plan is to retire the investment in the form of depreciation allowances adjusted to each class of property or based on the composite life of the whole.

Basing the amortization period on the estimated average service life of the highway elements purchased by the expenditure of capital, as was done by Messrs. Breed, Older and Downs,¹¹ was found to be impracticable. Insufficient information is available concerning the useful life of the many classes of highway property in Ontario and consequently no composite life could be adopted that would be generally acceptable without a detailed and lengthy examination of all of the physical property involved and all available records respecting it. Moreover, important constituent parts of a highway, such as land, grading, and drainage structures suffer little or no depreciation with the lapse of time and may be perpetuated by maintenance. In such cases any depreciation that arises is associated with the unpredictable factor of obsolescence. The Commission has for these reasons estimated capital charges on the basis of amortization of debt over a reasonable but arbitrary period, regardless of the type of property for which it was incurred, rather than on the concept of retirement of physical property when its useful life is over.

On this basis, the annual cost of the public roads is composed of three elements:

(1) The annual cost of maintaining and administering the roads after they are constructed.

(2) The interest on outstanding loans created for highway purposes.

(3) The annual instalment required to amortize such loans over a reasonable period.

When it is desired to minimize borrowing, a modified plan may be pursued whereby the annual capital payment would consist of

(a) Interest and amortization on loans previously created for highway purposes.

(b) Interest and amortization on abnormal extensions.

(c) The full cost of normal extensions and betterments.

An even more conservative procedure would be to treat annual capital cost as composed of

(a) Interest and amortization charges on outstanding loans previously created for highway purposes.

(b) The full cost of current additions and betterments to the system.

¹¹*Ibid.*, pp. 20; 33-35.

It was urged on behalf of the Railway Association of Canada that the highway system of the Province should be considered and treated as a public utility would be treated if privately operated and financed upon the usual basis of public utility accounting. This would involve charging the publicly-owned utility with taxes, with interest on its outstanding investment cost to date and with such annual amounts as would retire the various items of investment cost during the estimated lifetime of the works constructed with each increment of investment. On the other hand, it was urged on behalf of the Automotive Transport Association of Ontario that the provision of highways is a fundamental obligation of government, and that the users of the highways should not be directly charged with any loans which the Government had to assume in order to provide the Highways.

The Commission does not accept either of these viewpoints. It does, however, accept the principle that there is an obligation on the public as a whole to supply itself with a basic system of roads and that such obligation is a local necessity for the social needs of restricted areas. Accordingly, as is pointed out in Chapt. XIII, the cost of satisfying these wholly local needs should be assumed by the local community.

At the same time, there is an obligation upon the Province to supply facilities for other than local traffic, and to do so on any basis of financing or from any source of taxation most convenient to it. No doubts were expressed in the hearings that the only non-local traffic on the highways is motor vehicle traffic.

In view of all the circumstances, the Commission finds that there is an obligation upon every municipal government to provide itself with roads up to a standard represented by the annual expenditure of a certain number of dollars per capita. The tentative studies made by the Commission and reported in Chapt. XIII and Appendix A-XIII, lead it to the opinion that this should be approximately \$3.00 per capita. Such amount is not fixed, but at any time is essentially the same in all municipalities. The basic sum to be expended by the municipalities, known to lie within a narrow range, could be fixed from time to time by the Government of the Province. All amounts over and above the one so determined as the responsibility of the municipalities have been, and are, necessitated by motor vehicles and should be paid for by the owners and operators of them. If there were no motor vehicles, there would be few roads required in either new or old Ontario other than purely local roads.

It is obvious that the borrowing of money for roads without intent ever to retire the debt, on the ground that the life of the roads is perpetual, is as unthinkable as it is impossible. All sections of the community agree that such debts should be amortized over some definite period. Thirty years, as the conventional life of one generation, appeals to the Commission as a fair term of amortization, if there is to be a continuance of the policy of building roads with borrowed money to be repaid over an extended term.

On the other hand, and with bearing on the highway situation in Ontario, many pointed comments were made during the progress of the enquiry concerning the great incubus of debt of the Canadian National Railways. While, under the Reference, the difficulties of the railways could not be allowed to affect the findings or recommendations of the Commission, it is obvious that one of the difficulties arises from reduced revenue through loss of traffic to, and competition with, the motor vehicle. Such reduction in revenue has come about through changed conditions in our civilization.

Judging from this and many other like instances, it is apparent that characteristic public utility financing over a long period ignores the possibility of functional obsolescence and assumes it as fundamental that revenue will continue year by year in such amounts as will meet all charges for interest and amortization. It is inherent in a constantly growing system of any character that such annual charges increase year by year during the period of amortization at least. To meet them requires constantly increasing annual revenues. Once the increasing trend of revenue is affected for any reason, the whole basis of public utility accounting is undermined.

The Commission, while it sees no present indication that motor vehicle revenue and the use of motor vehicles will not continue to increase indefinitely, believes that it is most unwise to base any system of provincial financing on such an assumption, and strongly recommends that as quickly as possible the highways system be placed on essentially a pay-as-you-go basis.

Such would involve meeting new capital expenditures as they occur in full from revenue and the complete elimination of interest charges, except on highway debt incurred between November 1, 1918, and the date of adoption of the pay-as-you-go plan. Assuming a constantly expanding road system, motor users would year by year bear approximately equal burdens, as contrasted with the constantly mounting burden of debt charges under the deferred-payment plan.

12.12—Annual Cost to the Province and Its Relation to Revenue. Fig. 6, based on Table 12.16, exhibits the annual costs of the highway system to the Province of Ontario, on the assumption that all money for construction was borrowed on $4\frac{1}{2}$ per cent. thirty-year sinking fund debentures, sinking funds being assumed as invested in the debentures against which they were reserved. It is immaterial whether the amounts so expended were actually borrowed or not. On such sums as were taken from general revenue for highway construction, the Province was deprived of interest and no use could be made of them for the meeting of other obligations. The inauguration of the highway programme was assumed as at the beginning of the fiscal year 1919, namely, November 1, 1918, and the years shown are fiscal years.

The lower stepped line 1 represents the annual expenditure for interest on the average amount invested in roads during the respective years indicated. The depth of the hatched area between lines 1 and 2 represents the amount annually placed in sinking funds to retire all outstanding loans at the beginning of the year in thirty years from the date at which each of such loans was contracted. The vertical distance between stepped lines 2 and 3 represents the cost of maintenance and administration of the roads to the Province in the respective years indicated. The distance from the base line to the top dotted line 4 represents the revenue to the Province from motor fuel tax and licences during each year from 1919 to 1938.

It will be seen that in most years, on the assumed basis of financing, the revenue exceeded the total cost of interest, amortization instalment, and maintenance and administration of the roads, and the annual surplus is shown hatched. In the years 1920, 1922, 1923, 1924, 1925, 1927 and 1928 deficits of revenue occurred, and are marked "D" in the figure.

From Tables 12.10 and 12.16 it is seen that for the ten years and five months from November 1, 1927, to March 31, 1938, the average annual cost on the deferred-payment basis was about \$17,300,000, as compared with an average annual revenue of \$20,090,000.

Fig. 6 strikingly exhibits the large fraction of the total annual expenditure under the deferred-payment plan that must be paid in the form of interest. With the aid of Table 12.16, it may be shown that for the fiscal years 1928 to 1938, inclusive, the average annual interest payment is about \$8,150,000, or 47 per cent. of the average total annual cost of \$17,300,000.

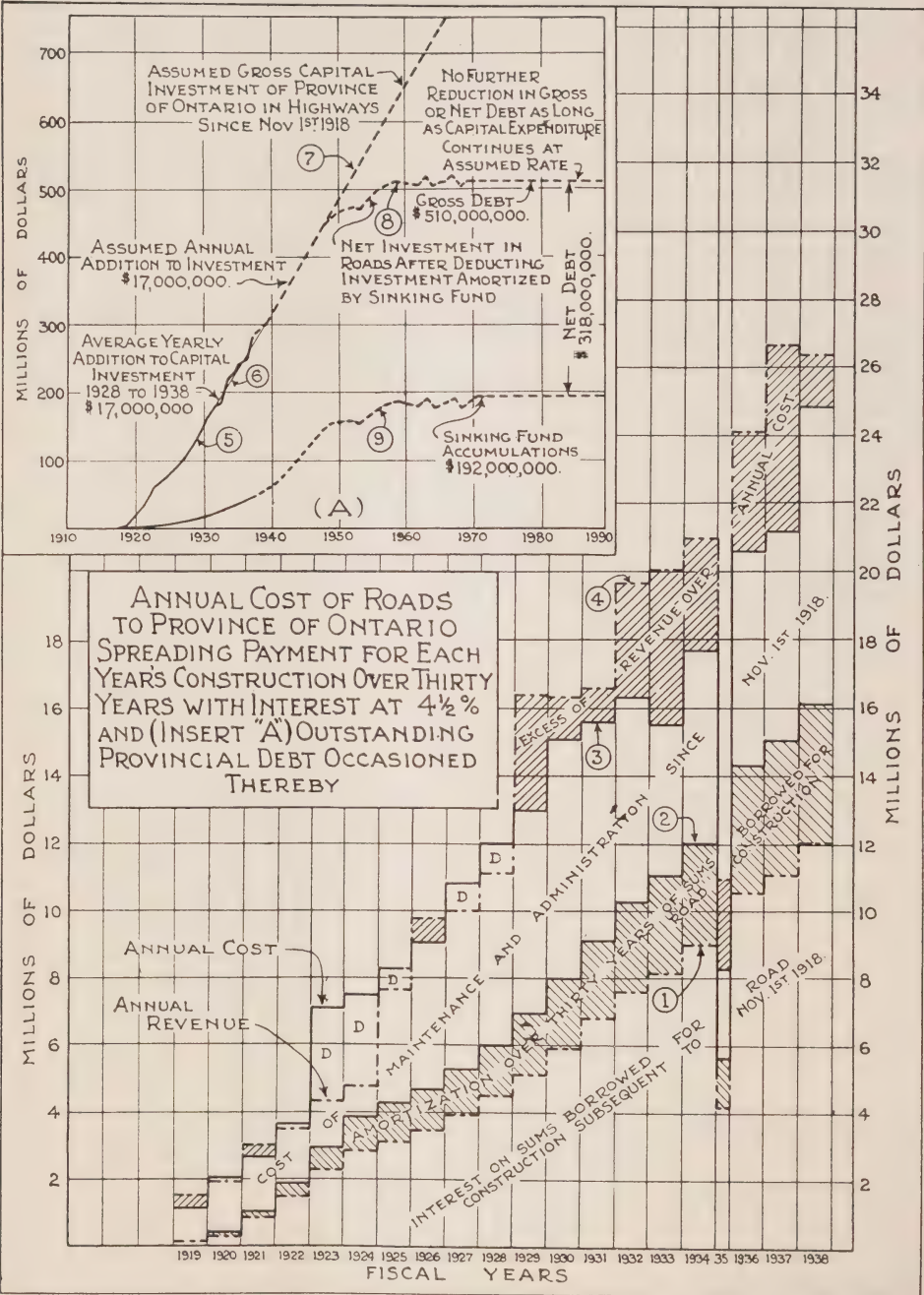


FIG. 6—Annual Cost of Roads to Province of Ontario on 30-Year Sinking Fund Basis and Debt Occasioned Thereby

Table 12.11—Accumulation of Net Debt of the Province of Ontario on Highway Account From November 1, 1918, to March 31, 1938

Fiscal Year Ending	Net Capital Expenditure	Accumulated Capital Expenditure to End of Year	Interest at 4½%	Net Ordinary Expenditure	Ordinary Revenue	Excess of Revenue Over Net Ordinary Expenditure	Excess of Revenue Over Net Ordinary Expenditure and Interest	Prior Years' Excess Revenue Accumulated at 4½%	Total Accumulation	Total Shortage	Net Provincial Highway Debt
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Oct. 31, 1919	\$3,414,451.88	\$ 3,414,451.88	\$ 76,825.17	\$1,164,250.02	\$ 1,580,105.61	\$ 475,855.59	\$ 399,030.42	...	\$ 408,008.60	...	\$ 3,006,443.28
1920	8,204,701.09	11,619,152.97	338,258.11	1,613,902.44	1,990,833.38	376,930.94	38,874.83	\$ 426,368.99	466,914.00	...	11,153,238.97
1921	12,434,007.65	24,053,160.62	802,627.04	1,639,005.66	2,945,380.36	1,306,374.70	503,727.66	486,880.13	1,001,791.66	...	23,051,218.96
1922	15,407,996.80	39,461,157.42	1,429,072.16	1,786,527.92	3,477,430.13	1,690,902.21	261,830.05	1,047,029.03	1,814,750.19	...	38,146,407.23
1923	20,308,244.28	59,769,401.70	2,232,687.58	4,150,896.39	4,296,009.32	145,112.93	D 2,087,574.65	1,373,913.95	...	760,631.13	60,530,032.83
1924	6,821,976.37	66,591,378.07	2,843,117.54	3,611,341.33	4,785,235.13	1,173,893.80	D 1,669,223.74	D 794,859.53	...	2,501,640.80	63,093,018.87
1925	6,273,489.65	72,864,867.72	3,137,765.54	3,997,007.28	7,613,427.48	3,616,420.20	478,854.66	D 2,614,214.64	...	2,124,730.25	74,989,657.97
1926	8,887,423.22	81,752,290.94	3,478,886.07	4,362,501.83	9,791,803.61	5,429,301.78	1,950,415.71	D 2,220,405.81	...	226,105.71	81,978,396.65
1927	11,108,839.15	92,861,130.09	3,928,801.97	5,529,494.62	9,997,805.35	4,467,855.73	539,053.76	D 236,280.47	314,902.00	...	92,546,228.09
1928	13,779,254.99	106,640,385.08	4,488,784.09	5,970,989.67	11,077,531.54	5,106,541.87	617,757.78	329,072.61	960,729.94	...	105,679,655.14
1929	16,363,901.56	123,004,286.64	5,167,005.11	6,070,938.58	16,346,042.52	10,275,103.94	5,108,098.83	1,003,962.79	6,226,993.84	...	116,777,292.80
1930	18,748,342.41	141,752,629.05	5,957,030.60	7,045,872.60	16,304,090.41	9,258,217.81	3,301,187.21	6,507,208.56	9,832,672.48	...	131,589,956.57
1931	19,970,324.76	160,722,953.81	6,805,700.61	6,459,748.40	16,561,088.19	10,101,339.79	3,295,639.18	10,327,392.74	13,697,183.80	...	147,025,770.01
1932	16,355,047.75	177,078,001.56	7,600,521.50	6,097,485.21	19,717,910.51	13,620,425.30	6,019,903.80	14,313,557.08	20,468,908.72	...	156,609,092.84
1933	6,567,157.54	183,645,159.10	8,116,271.12	4,441,687.17	20,050,216.72	15,608,529.55	7,492,258.43	21,390,009.61	29,050,843.85	...	154,594,315.25
Oct. 31, 1934	32,558,490.83	216,203,649.93	8,996,598.20	5,716,573.10	21,011,057.55	15,294,484.45	6,297,886.25	30,358,131.82	36,797,720.51	...	179,405,929.42
Mar. 31, 1935	11,561,833.52	227,765,533.45	4,162,211.09	2,714,711.96	10,926,525.84	8,213,813.88	4,051,602.79	37,487,677.77	41,577,264.34	...	186,188,269.11
1936	13,937,497.31	241,703,030.76	10,563,042.70	6,326,338.32	24,156,258.47	17,839,919.55	7,276,876.95	43,448,241.24	50,889,847.92	...	190,814,182.34
1937	8,217,047.39	249,920,078.15	11,061,519.95	6,196,123.14	26,680,649.41	20,484,526.27	9,423,006.22	53,178,846.08	62,813,869.94	...	187,106,208.21
1938	24,177,388.54	284,097,466.69	12,015,394.76	8,757,375.99	26,411,853.71	17,654,477.72	5,639,082.96	65,640,494.09	71,406,456.41	...	212,691,016.28
	<u>\$284,097,466.69</u>			<u>\$93,593,227.13</u>	<u>\$255,733,235.24</u>	<u>\$162,140,008.11</u>					

Notes:

(a) The above statement of accumulated provincial debt for road purposes, includes \$9,700,795.29 of unemployment relief fund expenditures on capital account provided by the Province out of capital borrowings and used for roads but not included in departmental road costs, and \$40,209,252.26 included in departmental road costs.

(d) D indicates a deficiency.

(b) Figures in columns (2), (5) and (6) were compiled from the Public Accounts of Ontario.

(c) The amounts in column (12) are those in column (3) less those in column (10), or those in column (3) plus those in column (11), as the case may be.

Table 12.12—Accumulation of Net Debt of the Province of Ontario on Highways Account From
November 1, 1914, to October 31, 1918

Fiscal Year Ending (1)	Net Capital Expenditure (2)	Accumulated Capital Expenditure to End of Year (3)	Interest at 4½% (4)	Net Ordinary Expenditure (5)	Ordinary Revenue (6)	Excess of Revenue Over Net Ordinary Expenditure (7)	Excess of Revenue Over Net Ordinary Expenditure and Interest (8)	Prior Years' Excess Accumulated (9)	Total Accumulation (10)	Net Provincial Highway Debt (11)
Oct. 31, 1915	957,197.29	957,197.29	21,536.94	192,606.83	334,759.78	142,152.95	120,616.01	...	123,329.87	833,867.42
1916	930,139.57	1,887,336.86	64,002.01	284,541.90	639,987.09	355,445.19	291,443.18	128,879.71	426,880.36	1,460,456.50
1917	991,502.11	2,878,838.97	107,238.96	477,729.66	930,753.00	453,023.34	345,784.38	446,089.97	799,654.50	2,079,184.47
1918	\$1,374,920.73	\$4,253,759.70	\$160,483.47	\$451,977.46	\$1,214,093.87	\$762,116.41	\$601,632.94	\$835,638.95	\$1,450,808.63	\$2,802,951.07

Note: The amounts in column (11) are those in column (3) less those in column (10). Accumulated to March 31, 1938, \$6,590,109.41

12.13—Debt Accumulation Incurred by Deferred-Payment Plan. From Tables 12.11 and 12.16 it is seen that during the 19 years and five months of the period comprised, annual revenues exceeded annual costs on the assumed basis by \$23,018,410. If each year's excess (or deficiency) of revenue had been allowed to accumulate at $4\frac{1}{2}$ per cent. interest, their algebraic sum together with accumulated sinking fund payments, would have totalled \$71,406,456, which deducted from total investment in roads in the period mentioned amounting to \$284,097,467 leaves a net provincial debt of \$212,691,010 as of March 31, 1938, as shown in Table 12.11.

Tables 12.11, 12.13 and 12.17 yield similar data respecting the situation of the Province in the matter of highways if the accounting be started as of January 1st, 1903. Excess of annual revenue over annual costs on the previously assumed basis, total \$6,276,183 for the period of thirty-five years and three months. The annual surpluses (or deficiencies), with sinking fund instalments all accumulated at $4\frac{1}{2}$ per cent. interest would total \$46,422,812. This amount deducted from total investment in roads of \$295,713,430 (\$294,473,664 outstanding), leaves a net provincial debt for roads on this basis of \$249,230,617, shown in Table 12.14.

The extent of the debt and its general trend, with the accounting starting November 1, 1918, are shown in the insert "A" of Fig. 6. The heavy full line 5 represents provincial capital expenditure on roads accumulated from November 1, 1918, and totalling \$284,097,466.69 (Table 12.11) as of March 31, 1938. The average expenditure per fiscal year from 1928 to 1938 has been somewhat in excess of \$17,000,000 per year, as shown by the fine line 6. An annual capital expenditure of this amount has been assumed to represent the general trend of future expenditures, and the curve of total expenditures has been projected ahead at that rate in a straight line 7 from March 31, 1939. Beginning in 1949, the first retirement of capital through the operation of the sinking fund would occur, so that the unamortized provincial investment in roads from 1949 onwards is represented by the generally horizontal line 8. It will be noted that from 1970 onwards, capital investment remains fixed at \$510,000,000, representing thirty years' unamortized investment at the uniform rate of \$17,000,000 per year.

The lower curve, 9, in the insert "A" represents the accumulations in the sinking fund at the end of each year during the period, assumed as beginning in 1919. This curve rises appreciably slower than the investment curve, and becomes level and fixed in 1970 (under the assumed conditions of uniform expenditure of \$17,000,000 annually from March 31, 1939, onward) at the amount of \$192,000,000.

The vertical distance between the curves 8 and 9 in the insert "A" represents the net debt of the Province on roads account for the year at which this intercept is measured. On the assumption that capital expenditure will continue at the rate of \$17,000,000 per year indefinitely, the net debt for roads would reach a maximum of \$318,000,000 about 1970 and thereafter remain fixed, requiring an annual interest payment at $4\frac{1}{2}$ per cent. of \$14,310,000 forever. Annual capital increments and annual capital retirements would offset one another.

If during the interval interest rates were 3 per cent., the capital investment would still build up to \$510,000,000, the sinking fund would stabilize at \$209,340,000, and the annual interest requirement on the net debt would be \$9,019,800 forever.

Were the rate of capital additions to exceed \$17,000,000 annually, the

total debt and net debt would both increase, and if less than \$17,000,000 annually and the total debt and net debt would lessen.

The curves in the insert "A" and the calculations in the preceding three paragraphs give no consideration to any surpluses of revenue over annual costs or, conversely, to any deficiencies of revenue. It is admittedly difficult to forecast either revenues or expenditures in the years ahead, and it is for that reason that the Commission advises a more certain retirement of the present highway debt than is accomplished by spreading the amortization of each annual increment of debt over the ensuing thirty years.

12.14—Suggested Plan of Meeting Annual Highway Debt Charges.

The total funded and unfunded debt of the Province on March 31, 1938, was \$678,074,515.94.¹² This is comprised of debenture issues with varying amounts outstanding, bearing dates of issue ranging from 1906 to 1937, and with rates as high as 6 per cent. and as low as 2 per cent. One third of this amount of debt is \$226,024,838.65, which compares with estimates of debt for roads as follows:

Accounting commencing January 1, 1903:

Based on interest at 5 per cent	\$268,345,022.19
Based on interest at 4½ per cent.	\$249,230,617.15
(Table 12.14)	

Accounting commencing November 1, 1918:

Based on interest at 5 per cent.	\$226,792,320.27
Based on interest at 4½ per cent.	\$212,691,010.28
(Table 12.14)	

The above amounts give the roads credit for all of the so-called highway revenue.

It would be exceedingly difficult, if not impossible, to determine the proportion of each series of debentures that was issued on account of roads. But it might be found convenient, would not be unfair, and would apparently obviate many difficulties to charge the Department of Highways with one-third of the outstanding debt of the Province, as of March 31, 1938, this charge carrying with it the obligation to supply out of highway revenues one-third of all sums needed for interest payments and retirements of the debenture issues and floating debt as of that date, or any debentures issued from time to time in substitution of any part of such. Such procedure would obviate all controversy as to what rate of interest might at any time be fair. From that date forward the highways would be charged with the specific amount of each debenture issue made that would represent monies required for highway purposes in excess of revenue.

If this plan were adopted all highway revenues of every character would obviously be specifically credited to highways account. The Department of Highways might then properly maintain a continuing balance sheet, set up in accordance with the foregoing suggestion. This should show all capital obligations in detail from year to year, accumulated sinking funds in the hands of the Provincial Treasurer, total investment in roads, amount amortized to date, *etc.*

¹²The Public Accounts of Ontario for the Year Ended March 31, 1938, p. 42.

Table 12.13—Accumulation of Net Debt of the Province of Ontario on Highways Account From January 1, 1903, to October 31, 1918

Fiscal Year Ending (1)	Net Capital Expenditure (2)	Accumulated Capital Expenditure to End of Year (3)	Interest at 4½% (4)	Net Ordinary Expenditure (5)	Ordinary Revenue (6)	Deficiency of Revenue to Meet Net Ordinary Expenditure (7)	Deficiency of Revenue to Meet Net Ordinary Expenditure and Interest (8)	Prior Years' Deficiencies Accumulated at 4½% (9)	Total Shortage (10)	Net Provincial Highway Debt (11)
Dec. 31, 1903	152,688.31	152,688.31	3,435.49	69,999.17	710.00	69,289.17	72,724.66	...	74,360.96	227,049.27
1904	253,436.62	406,124.93	12,573.30	75,398.30	1,282.00	74,116.30	86,689.60	77,707.21	166,347.33	572,472.26
1905	191,316.99	597,441.92	22,580.25	76,712.71	3,096.65	73,616.06	96,196.31	173,832.95	272,193.67	869,635.59
1906	273,361.81	870,803.73	33,035.53	95,696.61	5,523.15	90,173.46	123,208.99	284,442.40	410,423.59	1,281,227.32
1907	368,983.64	1,239,767.37	47,487.85	135,798.49	8,098.50	127,699.99	175,187.84	428,892.65	608,022.22	1,847,789.59
Dec. 31, 1908	495,868.60	1,735,635.97	66,946.57	195,909.67	10,007.75	183,901.92	250,848.49	635,383.22	891,875.80	2,627,511.77
Oct. 31, 1909	494,664.25	2,230,300.22	74,361.30	189,538.38	12,418.75	177,119.63	251,480.93	925,321.14	1,181,517.30	3,411,817.52
1910	499,816.38	2,730,116.60	111,609.38	191,759.13	24,394.01	167,365.12	278,974.50	1,234,685.58	1,519,937.01	4,250,053.61
1911	612,402.51	3,342,519.11	136,634.30	190,940.08	50,831.22	140,108.86	276,743.16	1,588,334.18	1,871,304.06	5,213,823.17
1912	905,466.18	4,247,985.29	170,786.35	191,175.79	73,255.96	117,919.83	288,706.18	1,955,512.74	2,250,714.81	6,498,700.10
1913	1,697,294.57	5,945,279.86	229,348.47	233,266.23	105,558.95	127,707.28	357,055.75	2,351,996.98	2,717,086.48	8,662,366.34
1914	1,416,924.26	7,362,204.12	299,418.39	293,379.10	149,210.45	144,168.65	443,587.04	2,839,355.37	3,292,923.12	10,655,127.24
1915	957,197.29	8,319,401.41	352,836.13	192,606.83	334,759.78	S 142,152.95	210,683.18	3,441,104.66	3,656,528.21	11,975,929.62
1916	930,139.57	9,249,540.98	395,301.20	284,541.90	639,987.09	S 355,445.19	39,856.01	3,821,071.98	3,861,824.85	13,111,365.83
1917	991,502.11	10,241,043.09	438,538.14	477,729.66	930,753.00	S 453,023.34	S 14,485.20	4,035,606.97	4,020,795.85	14,261,838.94
Oct. 31, 1918	1,374,920.73	11,615,963.82	491,782.65	451,977.46	1,214,093.87	S 762,116.41	S 270,333.76	4,201,731.66	3,925,315.39	15,541,279.21
Accumulated to March 31, 1938										\$36,539,606.87
										\$11,615,963.82

Notes:

(a) The amounts in column (11) are those in column (3) plus those in column (10).

(b) S indicates a surplus.

Table 12.14—Accumulation of Net Debt of the Province of Ontario on Highways Account Up to March 31, 1938, Beginning at Various Dates

INTEREST RATE, $4\frac{1}{2}$ PER CENT.

Fiscal Year Ending	Beginning January 1, 1903	Beginning November 1, 1914	Beginning November 1, 1918
Dec. 31, 1903	\$ 227,049.27	...	...
1904	572,472.26	...	...
1905	869,635.59	...	...
1906	1,281,227.32	...	...
1907	1,847,789.59	...	...
Dec. 31, 1908	2,627,511.77	...	...
Oct. 31, 1909	3,411,817.52	...	...
1910	4,250,053.61	...	...
1911	5,213,823.17	...	...
1912	6,498,700.10	...	...
1913	8,662,366.34	...	...
1914	10,655,127.24	...	...
1915	11,975,929.62	\$ 833,867.42	...
1916	13,111,365.83	1,460,456.50	...
1917	14,261,838.94	2,079,184.47	...
1918	15,541,279.21	2,802,951.07	...
1919	19,247,080.05	5,935,527.14	\$ 3,006,443.28
1920	28,124,704.40	14,214,131.60	11,153,238.97
1921	40,786,400.33	26,249,851.76	23,051,218.96
1922	56,679,671.76	41,488,978.51	38,146,407.23
1923	79,897,294.27	64,023,019.82	60,530,032.83
1924	89,331,807.07	72,743,190.27	69,093,018.87
1925	96,139,191.64	78,804,087.08	74,989,657.97
1926	104,079,659.33	85,964,475.07	81,978,396.65
1927	115,642,047.59	96,711,680.04	92,546,228.09
1928	129,814,786.52	110,032,552.43	105,679,655.14
1929	141,998,505.09	121,326,070.47	116,777,292.80
1930	158,226,123.41	136,623,429.19	131,869,956.57
1931	174,567,964.36	151,993,148.90	147,025,770.01
1932	185,390,685.94	161,800,003.78	156,609,092.84
1933	184,671,080.04	160,018,817.18	154,594,315.25
Oct. 31, 1934	210,836,148.63	185,074,525.17	179,405,929.42
Mar. 31, 1935	218,207,802.53	191,963,151.04	186,188,269.11
1936	224,274,595.26	196,848,934.46	190,814,182.84
1937	222,072,339.19	193,412,523.65	187,106,208.21
1938	249,230,617.15	219,281,119.69	212,691,010.28

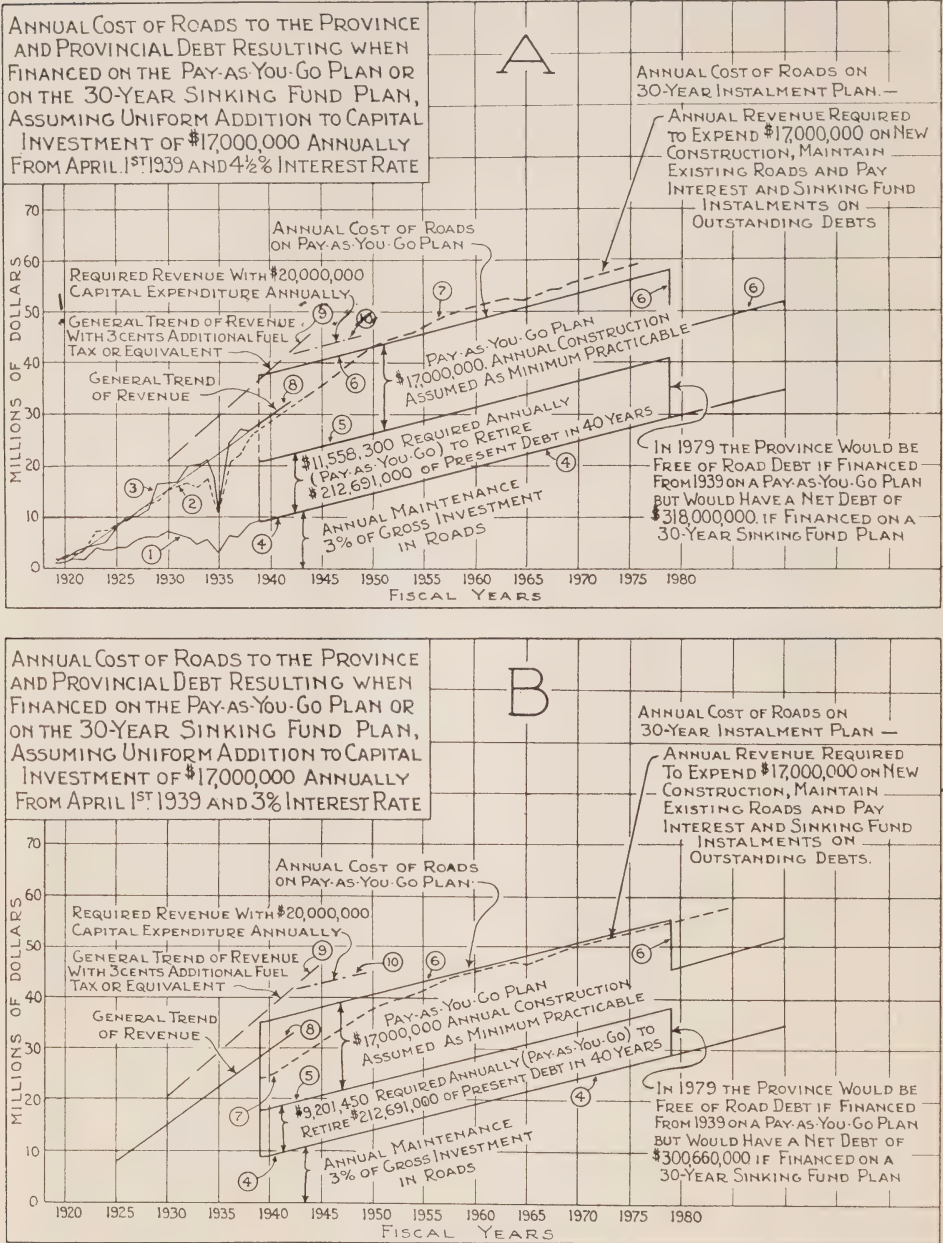


FIG 7—Annual Costs of Roads to the Province According to Various Plans and Their Relation to Provincial Highway Debt.

12.15—Relation of Annual Road Costs to Revenue and to Debt According to Various Plans. While the annual cost of the roads to the Province depends on the plan of financing that is being followed, the adoption of a plan involving a certain level of annual capital expenditure may, unless care is exercised, bring in its train a heavy accrual of debt. The acceptance of any plan as a basis for estimating total annual costs should be with a full realization of what is involved in the pursuit of that plan. To throw light on this aspect of the matter Fig. 7 has been prepared. Section A of the figure depicts the future cost-debt situation with money at $4\frac{1}{2}$ per cent., while section B presents corresponding information on the basis of an interest rate of 3 per cent.

There is shown at the left of section "A" of the figure, for the years 1919 to 1938, the annual cost of maintenance of roads (line 1), the annual highway revenue (line 3) and the total annual cost (line 2), the last comprising maintenance, interest and instalments for thirty-year amortization of outstanding indebtedness. The general trend of revenue has been reasonably uniform, as is indicated by line 8, which has been projected forward to 1942.

From March 31, 1939, forward, annual costs have been estimated on two bases and with two rates of interest, namely $4\frac{1}{2}$ per cent. in section "A" of the figure and 3 per cent. in section "B". The full straight lines indicate the cost on a pay-as-you-go basis; the heavy dotted line, the total cost on a thirty-year amortization basis. From 1950 onwards the annual costs are not dissimilar, although the ultimate results are vastly so.

The first line, 4, above the base represents the cost of annual administration and maintenance, which will increase year by year as the mileage of roads increases. It is assumed in every case that \$17,000,000 annually (the average capital expenditure for the last ten fiscal years) will be consistently spent on new construction, and that the extent and character of the roads provided with this annual expenditure will average the same from year to year; and that the cost of maintenance in any year will be 3 per cent. of the gross capital investment cost of the roads as at the end of the previous year. This percentage is slightly less than the actual average experienced for the past ten years.

The vertical distance between lines 4 and 5 represents the annual cost of retiring in forty years the net debt of \$212,691,010 for roads as of March 31, 1938, as accumulated from November 1, 1918 (Table 12.14), namely, \$11,558,300 if at $4\frac{1}{2}$ per cent. interest, and \$9,201,450 if at 3 per cent. interest.

The vertical distance from this line, 5, to the straight line, 6, represents \$17,000,000 to be paid out of revenue annually on capital extensions. The distance from the base line to line 6 represents the total annual cost of roads on the pay-as-you-go plan, which if met year by year would leave the road system entirely clear of debt in 1979.

The vertical distance from the base line to the dotted line 7 in each section of the figure represents the cost of maintenance (shown by the lower line 4), interest on the outstanding debt and amortization charges on a thirty-year sinking fund basis. The debt increases year by year by the difference between the annual sinking fund accumulations and the assumed amount of \$17,000,000 spent on new construction each year.

Gross and net debt will increase until the annual retirement of capital becomes equivalent to the annual increment of capital for new construction. When this occurs, the vertical distance between the lower line 4, which represents maintenance cost, and the dotted line 7 represents the yearly payment of \$17,000,000 for new construction and the interest on the static net debt.

If all yearly costs represented by the vertical distance from the base line to line 7 are met year by year, full annual obligations under the deferred-payment plan are met, but the net debt will never be reduced below \$318,000,000, if the interest rate is $4\frac{1}{2}$ per cent. or below \$300,660,000 if the interest rate is 3 per cent. This equilibrium is obtained when the amount reserved for amortization plus the interest on the sinking fund accumulation equals the amount of new borrowing for construction. When this state is reached (approximately, about 1955, but, on the assumed basis, not completely until 1970), from \$9,000,000 to \$14,000,000 interest is payable annually, depending on the interest rate, without any effect upon the corpus of the debt itself.

It hence appears highly desirable to attain a pay-as-you-go basis as speedily as possible. To accomplish this it would be necessary, as indicated in section "A" of Fig. 7, to obtain in the fiscal year 1939 about 9 million dollars more than the revenue to be anticipated from the general trend heretofore shown, with lesser amounts in subsequent years, provided the trend of increase in revenue remains constant, and the annual expenditure on construction remains limited to the assumed \$17,000,000. Having in mind the situation depicted by this diagram, the Commission believes that either annual revenues should be increased or annual capital expenditures reduced.

Line 9 in the figure indicates the trend of revenue had an additional three cents per gallon been received from fuel tax. With increased revenue amounting to three cents per gallon of motor fuel consumed, or its equivalent, and a strict limitation of capital construction to \$17,000,000 annually, the highways, so far as provincial expenditure is concerned, should be self supporting in 1940. After this date some excess revenue might be available with which to undertake a larger programme of construction or municipal subsidies. While under exceptional circumstances, with assured large increases of revenue to be derived therefrom, a limited amount of work might be undertaken on the deferred-payment plan, the Commission is of the opinion that this should, in general, be avoided.

The important parts of both sections of Fig. 7 are those for the years 1939 to 1950. It is quite possible that the cost of money will reduce to below $4\frac{1}{2}$ per cent., but in the meantime until the existing debt is paid, the average rate for some years will not be very far removed from that rate. It is possible that the cost of maintenance may not increase in later years at the rate shown, but an altered slope to the curve makes little difference in the amount of money required for maintenance year by year during the next ten years. The graph is based on a net debt for roads as of March 31, 1938, of \$212,691,010.28, which assumes the beginning of highway accounting as of November 1, 1918.

The Commission has already suggested that for simplicity, the Department of Highways be charged with one-third of each individual issue of the outstanding provincial debt, namely \$226,024,838.65, or 7 per cent. more than shown on the diagram. Furthermore, \$17,000,000 per annum is a very limited expenditure for road extensions and betterments, having regard to the demands from all quarters for such and to expenditures in the past few years. All in all, the Commission is convinced that a three-cent increase on the fuel tax is essential, if the highway business of the Province is to remain on a sound economic basis and a reasonable programme of road expansion is to be maintained.

On the basis of this conclusion it has estimated the annual cost of roads to the Province, has allocated it to the various groups of motor vehicles and has made its recommendations regarding licence fees and motor fuel taxes.

Table 12.15—Comparison of Total Expenditure by the Province With Total Highway Revenue for the Period November 1, 1918, to March 31, 1938, and the Accumulated Highway Debt Occasioned by the Deficiencies

Fiscal Year	Total Expenditure on Construction, Maintenance and Administration	Total Highway Revenue	Deficiency of Revenue	Accumulated Provincial Highway Debt (Table 12.11)
(1)	(2)	(3)	(4)	(5)
1919	\$ 4,518,701.90	\$ 1,580,105.61	\$ 2,938,596.29	\$ 3,006,443.28
1920	9,818,603.53	1,990,833.38	7,827,770.15	11,153,238.97
1921	14,073,013.31	2,945,360.36	11,127,652.95	23,051,218.96
1922	17,194,524.72	3,477,430.13	13,717,094.59	38,146,407.23
1923	24,459,140.67	4,296,009.32	20,163,131.35	60,530,032.83
1924	10,433,317.70	4,785,235.13	5,648,082.57	69,093,018.87
1925	10,270,496.93	7,613,427.48	2,657,069.45	74,989,657.97
1926	13,249,925.05	9,791,803.61	3,458,121.44	81,978,396.65
1927	16,638,788.77	9,997,805.35	6,640,983.42	92,546,228.09
1928	19,750,244.66	11,077,531.54	8,672,713.12	105,679,655.14
1929	22,434,840.14	16,346,042.52	6,088,797.62	116,777,292.80
1930	25,794,215.01	16,304,090.41	9,490,124.60	131,869,956.57
1931	25,430,073.16	16,561,088.19	8,868,984.97	147,025,770.01
1932	22,452,532.96	19,717,910.51	2,734,622.45	156,609,092.84
1933	11,008,844.71	20,050,216.72	9,041,372.01 S	154,594,315.25
1934	38,275,063.93	21,011,057.55	17,264,006.38	179,405,929.42
1935	14,276,595.48	10,928,525.84	3,348,069.64	186,188,269.11
1936	20,263,836.13	24,166,258.47	3,902,422.34 S	190,814,182.84
1937	14,413,170.53	26,680,649.41	12,267,478.88 S	187,106,208.21
1938	42,934,764.53	26,411,853.71	16,522,910.82	212,691,010.28
Totals	\$377,690,693.82	\$255,733,235.24	\$121,957,458.58	

S indicates a surplus.

12.16—Annual Cost of Roads to Municipalities. The Commission could obtain no reliable information as to the total municipal debt for roads. That a part of this debt is properly chargeable to the motor vehicle is certain, but the problem of determining the proper payment to each municipality would be so involved, so stupendous a task, and so opinionative at best, as to be impracticable. Nor, having regard to other calls on highway revenue, does there appear to be the slightest practical possibility that any refunds to municipalities in the matter of past motor vehicle use could be made. Whatever be the amount that the municipalities have paid out, or to which they have obligated themselves on account of the motor vehicle solely, the Commission sees no alternative to writing it off as a subsidy granted.

Table 12.16—Total Annual Cost to the Province of the Highways of Ontario, Including Interest on the Unamortized Capital Expenditure, Sinking Fund Instalments on a Thirty-Year Basis and Maintenance and Administration, Assuming the Highway Construction Programme as Beginning November 1, 1918

Fiscal Year Ending	Accumulated Capital Expenditure or Borrowing at End of Year	ANNUAL COST TO THE PROVINCE			
		For Interest at 4½%	For Retirement of Each Annual Increment of Debt in 30 Years on 4½% Basis	For Ordinary Expenditure for Maintenance and Adminis- tration	Total Annual Cost
(1)	(2)	(3)	(4)	(5)	(6)
Oct, 31, 1919	\$ 3,414,452	\$ 76,825	...	\$1,104,250	\$1,181,075
1920	11,619,153	338,256	\$ 55,969	1,613,902	2,008,127
1921	24,053,161	802,627	190,459	1,639,006	2,632,092
1922	39,461,157	1,429,072	394,275	1,786,528	3,609,875
1923	59,769,402	2,232,688	646,839	4,150,896	7,030,423
1924	66,591,378	2,843,118	979,728	3,611,341	7,434,187
1925	72,864,868	3,137,766	1,091,553	3,997,007	8,226,326
1926	81,752,291	3,478,886	1,194,386	4,362,502	9,035,774
1927	92,861,130	3,928,802	1,340,068	5,529,950	10,798,820
1928	106,640,385	4,488,784	1,522,162	5,970,990	11,981,936
1929	123,004,287	5,167,005	1,748,028	6,070,939	12,985,972
1930	141,752,629	5,957,031	2,016,261	7,045,873	15,019,165
1931	160,722,954	6,805,701	2,323,581	6,459,748	15,589,030
1932	177,078,002	7,600,522	2,634,538	6,097,485	16,332,545
1933	183,645,159	8,116,271	2,902,627	4,441,687	15,460,585
Oct. 31, 1934	216,203,650	8,996,598	3,010,275	5,716,573	17,723,446
Mar. 31, 1935	227,765,533	4,162,211	1,476,653	2,714,712	8,353,576
1936	241,703,031	10,563,043	3,733,487	6,326,339	20,622,869
1937	249,920,078	11,061,520	3,961,948	6,196,123	21,219,591
1938	284,097,467	12,015,395	4,096,640	8,757,376	24,869,411
		<u>\$103,202,121</u>	<u>\$35,319,477</u>	<u>\$93,593,227</u>	<u>\$232,714,825</u>

Table 12.17—Total Annual Cost to the Province of the Highways of Ontario, Including Interest on the Unamortized Capital Expenditure, Sinking Fund Instalments on a Thirty-Year Basis and Maintenance and Administration, Assuming the Highway Construction Programme as Beginning January 1, 1903

ANNUAL COST TO THE PROVINCE					
Fiscal Year Ending	Accumulated Capital Expenditure or Borrowing at End of Year, Less Amount Retired, Beginning 1934	For Interest at 4½%	For Retirement of Each Annual Increment of Debt in 30 Years on 4½% Basis	For Ordinary Expenditure For Maintenance and Administration	Total Annual Cost
(1)	(2)	(3)	(4)	(5)	(6)
Dec. 31, 1903	\$ 152,688	\$ 3,435	...	\$ 69,999	\$ 73,434
1904	406,125	12,573	\$ 2,503	75,398	90,474
1905	597,442	22,580	6,657	76,713	105,950
1906	870,804	33,036	9,793	95,697	138,526
1907	1,239,767	47,488	14,274	135,798	197,560
Dec. 31, 1908	1,735,636	66,947	20,322	193,910	281,179
Oct. 31, 1909	2,230,300	74,361	23,708	189,538	287,607
1910	2,730,117	111,609	36,559	191,759	339,927
1911	3,342,519	136,634	44,752	190,940	372,326
1912	4,247,985	170,786	54,790	191,176	416,752
1913	5,945,280	229,348	69,632	233,266	532,246
1914	7,362,204	299,418	97,454	293,379	690,251
1915	8,319,401	352,836	120,680	192,607	666,123
1916	9,249,541	395,301	136,370	284,542	816,213
1917	10,241,043	438,538	151,617	477,730	1,067,885
1918	11,615,964	491,783	167,869	451,977	1,111,629
1919	15,030,416	599,543	190,407	1,104,250	1,894,200
1920	23,235,117	860,974	246,376	1,613,902	2,721,252
1921	35,669,125	1,325,345	380,866	1,639,006	3,345,217
1922	51,077,121	1,951,790	584,682	1,786,528	4,323,000
1923	71,385,366	2,755,406	837,246	4,150,896	7,743,548
1924	78,207,342	3,365,836	1,170,135	3,611,341	8,147,312
1925	84,480,832	3,660,484	1,281,960	3,997,007	8,939,451
1926	93,368,255	4,001,604	1,384,793	4,362,502	9,748,899
1927	104,477,094	4,451,520	1,530,475	5,529,950	11,511,945
1928	118,256,349	5,011,502	1,712,569	5,970,990	12,695,061
1929	134,620,251	5,689,723	1,938,435	6,070,939	13,699,097
1930	153,368,593	6,479,749	2,206,668	7,045,873	15,732,290
1931	172,338,918	7,328,419	2,513,988	6,459,748	16,302,155
1932	188,693,966	8,123,240	2,824,945	6,097,485	17,045,670
1933	195,108,435	8,638,989	3,093,034	4,441,687	16,173,710
Oct. 31, 1934	227,666,926	9,512,445	3,198,179	5,716,573	18,427,197
Mar. 31, 1935	238,975,373	4,377,147	1,554,946	2,714,712	8,646,805
1936	252,721,534	11,067,486	3,917,236	6,326,339	21,311,061
1937	260,665,238	11,557,354	4,142,561	6,196,123	21,896,038
1938	294,473,664	12,498,927	4,272,740	8,757,376	25,529,043
		<u>\$116,144,156</u>	<u>\$39,939,221</u>	<u>\$96,937,656</u>	<u>\$253,021,033</u>

CHAPTER XIII

ALLOCATION OF COST OF THE HIGHWAYS

SECTION 1—DIVISION OF COST BETWEEN THE GENERAL TAXPAYER AND THE OPERATORS OF MOTOR VEHICLES

13.1—Principle of Social-Necessity Value of Roads. Whatever the annual cost of the roads of the Province may be, it is evident that some share of it should be borne by the public as a whole. Every citizen, whether he personally makes use of motor vehicles or not, has an interest in the provision and maintenance of highways, which is associated with the comfort and convenience of living and the general social well-being of the community. The combined interest of all the members of the community in this regard is here called the “social-necessity value.”

The willingness of the people to spend money on highways does not arise wholly from the desire to secure a coveted standard of comfort and convenience, or security of life and property, but also from an appreciation of the general commercial and industrial advantages that flow from the promotion of highway traffic. It should be realized, however, that expenditures incurred primarily for commercial and economic purposes are not properly an element of social-necessity value, as it is commonly defined. Commerce is essentially ramifying and no transaction of it can be said to have local significance only. Expenditures for the promotion of commerce and industry being in large measure for the general benefit of the state, should be widely, and not merely locally, borne.

Benefits to communal life afforded by public roads, altogether apart from the right to operate motor vehicles on them, take many forms, amongst which are the following:

- (1) A means of passage for horses and other animals, horse-drawn vehicles, agricultural machinery, bicycles and pedestrians.
- (2) Free access to, or egress from, private properties.
- (3) Unimpeded access to schools, churches, public buildings, markets and places of business or amusement.
- (4) Drainage of adjacent lands.
- (5) Facilities for the transportation and delivery of the mails.
- (6) Facilities for police and fire protection, including sites for the erection of standards, boxes, signs, signals, hydrants, *etc.*
- (7) Facilities for ambulances, school buses, publicly-owned vehicles, and local transportation services.
- (8) Accommodation for pole lines, conduits and manholes necessary to the provision of power, telephone and telegraphic service and for water and gas mains and convenient facilities for their maintenance.
- (9) Increased utility and consequent enhanced value of adjacent lands by reason of the facilities that have been made available.
- (10) Facilities for advertising.
- (11) Military uses.

Certain other circumstances augment the liability of the general public with regard to roads relative to that portion of the obligation which is properly allocated to motor vehicles. For example, if there were no non-motor use of them, motor vehicles might operate with more elasticity of movement and less liability of accident, with the result that they would probably be relieved of part of their insurance costs. Then, too, by reason of the common practice of giving unemployment relief through the medium of highway construction, often carried on in an uneconomical manner, the cost of the highways has been measurably increased in the primary interest of general social conditions for which excess of cost motor vehicle users, as a class, should not be charged, any more than any other special group of taxpayers.

On the other hand, the value of lands adjacent to a road or street that is improved for through traffic may, in fact, be reduced by the work. Protests from property owners who have been assessed for the improvement of streets on which their property abuts as main traffic arteries are frequent and not without justification. Whatever renders property less attractive to a prospective purchaser or lessee can scarcely be said to confer a benefit upon it.

As a further offset to the social-necessity obligation of the public there might be urged the increased costs of general policing arising from the widespread use of motor vehicles and the adverse economic effect of the high accident rate incident thereto.

The obligation of the general taxpayer to support the highways is a continuing one. In the opinion of the Commission, it cannot, by reason of the inevitable change in the relative public interest in them with the passage of time, be discharged by any present settlement calculated to relieve the public generally of all further contributions in the matter. Whatever uncertainty exists does not attach to the propriety of resting some share of the general burden on corporate shoulders but rather in the extent of that burden at any time and from time to time.

13.2—Basis of the Social-Necessity Value. The social-necessity value attaching to a unit length of road or street is not the same for all places or times. Demands in respect of needs, conveniences and comforts vary with the location, size, density of population, age and character of the community. As the standards of living rise, the measure of social necessity becomes more exacting. That the total social-necessity requirements of a given community increase as the density of population increases may be asserted with confidence.

By and large, the cost of satisfying social necessity is represented by a more or less fixed amount of money or human labour per capita of the local community, and such per capita amount of money or labour should not differ from year to year or from place to place within a common culture to any greater extent than does the maintenance of a common standard of living.

While the social-necessity value of roads and streets per capita probably varies with the passage of time approximately as does the cost of living, there are grounds for believing that at any given date it is very nearly the same per capita for large and small communities and for sparsely and densely populated communities.

It appears not improbable that in a community of unchanging population, the social-necessity value per capita would vary more or less in conformity with the standard of living.

Under pioneer conditions, with widely scattered settlements, a road may be adequate to meet social necessity if it is little more than a trail through the

woods fit for travel under favourable weather conditions only. Social needs would be satisfied by a road that would permit the settler to reach the nearest store or market, possibly after waiting a few days, if it be during a period of inclement weather; ordinarily to reach the nearest church or school; to reach his nearest neighbour under all conditions; and to permit light vehicles, under the pressure of extreme necessity, to manage by some means to get through from the nearest town or village, except under the most exceptional circumstances. In short, the social-necessity value of a particular road is represented by the minimum amount of money or labour which those depending upon it find necessary to expend on its construction and repair in order that they may be able to live with an essential measure of comfort and security as a community along with their neighbours.

As settlement extends, social necessity can be satisfied only by a higher standard of roads to provide at all times access to schools, churches and stores, and for rural mail delivery, with space for a telephone line, and perhaps other facilities.

When settlement further intensifies to the extent that a village or a town is established, the demands of social necessity increase at the same time. Streets are required for sewers and watermains, for the distribution of electric current, for fire protection, and for store delivery purposes, particularly in view of the hand-to-mouth existence of town dwellers. Pavements are demanded to improve the appearance of business and residential streets, to facilitate surface drainage, to improve sanitary conditions, to eliminate mud and to contribute to the general amenities of life.

Social necessity demanded that cities be paved thousands of years ago when rural roads were probably little more than footpaths, but this difference in character bore a direct relation to the number of persons depending upon these roads for the necessary daily intercourse with their neighbours.

On the other hand, social necessity would seldom demand the construction of a roadway between competitive towns. Such interurban roads would only come normally by the interposition of the sovereign power. The Roman roads were an imperial and not a local community necessity.

13.3—Influence of the Motor Vehicle on Social-Necessity Value. Since the earliest days in Ontario, the theory of road control has been that they were essentially a matter for local jurisdiction and development. The Local Improvement Act, as it went on the statute books, and as it operated under the conditions that existed up to the coming of the motor car, had the same basis, namely, that those locally interested in any road betterment should be allowed to have it if they were prepared to pay for it. The mandatory provisions of the Act are relatively recent additions, and but for the coming of the motor car, would possibly never have been added.

The invention of the internal-combustion engine revolutionized all ideas respecting roads and highways. No longer is there any such thing as a "local road," for traffic local to any limited area has been thinly diluted in the great flood of traffic non-local to that area. A universal demand has sprung up for roads of a character altogether inconsistent with local uses. While for centuries the public highways have, except for toll roads and bridges in which the public authority may have had a financial interest, been free for use without restriction by all the King's subjects, the present generation has seen one of the most revolutionary changes in history. Governments everywhere now demand that a motor vehicle be licensed before it can utilize the public roads, though the use to be made of the roads is that commonly made by the majority of users. The

fees attached to such licences have from the beginning gone to a central authority, imposing upon it at least a moral obligation to assist in the construction and maintenance of all roads open to the motor vehicle within the limits of its jurisdiction.

13.4—Social Necessity Obligation Essentially Local. Social necessity requirements for roads are pre-eminently local in character and are little affected by the location of the community, or whether it be on an island or in the middle of a continent. The essential factor is the number of persons in the community. If the number is small and the area is great, the roads occasioned by social-necessity use will be meagre. If the area affected is small and the population great, the roads necessitated by social necessity will be of relatively high type.

The coming of the motor car should not have materially influenced the basic social necessity demands for roads. In spite of its onset, the requirements of social necessity still persist and the cost of meeting these should be borne by the local communities.

It cannot be gainsaid that the motor vehicle has added greatly to the convenience of living, has revolutionized our entire conduct of business and pleasure, and has become an essential factor in daily life. But it has not done so to any greater extent than has electricity or the telephone, and yet public opinion demands that these latter utilities be self-supporting. The Commission is convinced that the simplest, fairest, and cheapest method of dealing with additional public expenditures necessary to permit the motor vehicle to function satisfactorily is to assess them against the motor vehicle. In accordance with this conviction, the words "social-necessity value" are in this report limited in their meaning to the necessities of the community in respect of roads, apart altogether from their use by motor vehicles, other than in the most elemental and local way.

13.5—Estimating Social-Necessity Value. Many efforts have been made in other jurisdictions to fix the annual social-necessity value of roads, the commonest method being to consider it as measured by the amount that the community was willing to pay for roads or streets before the motor era began. This plan was adopted wholly or in part by Professor W. S. Downs in his studies of the situation in New York State,¹ by Professor W. D. Ennis in a similar study in New Jersey,² by H. M. Werbitzky, for Missouri highways,³ and by V. L. Glover, for Illinois, except for the primary road system of the State.⁴

The problem in Ontario is not exactly parallel. All the States above mentioned were relatively small, and were fully settled and developed before the motor vehicle appeared. Such is yet far from the case in Ontario. Moreover, the motor car has opened up great areas of Ontario that twenty-five years ago were wilderness.

In the year 1913, the motor car was just beginning to be a matter of moment in Ontario. Apart from motorcycles, there were only 23,700 motor licences issued in that year, and for the most part motor vehicles were located in the larger centres and in areas adjacent to them. To a negligible extent, if at all, had any street improvements been made as yet to accommodate motor traffic,

¹Motor Vehicle Taxation in New York, 1935.

²Motor Vehicle Taxation in New Jersey, 1935.

³*Re Brashear Freight Lines, Inc., et al. v. Public Service Commission of the State of Missouri, et al.*—A Study of Missouri Highway and Street Costs Chargeable to Motor Vehicles, etc., 1937.

⁴A Study of Highway Costs and Motor Vehicle Taxation in Illinois, 1937.

or any real consideration been given to the motor car in the construction of rural roads.

With a view to affording some guide to the probable magnitude of the social-necessity value of roads and streets in Ontario, studies have been carried out on the basis of all available statistical information. The results of these are contained in Appendix A-XIII. Both construction and maintenance have been included in these estimates. If construction of primary road surfaces is a social necessity, then ordinary maintenance of such primary road surfaces is also a cost properly chargeable to social necessity.

While, by reason of the incompleteness of the statistical data available, these estimates cannot be regarded as more than approximate, it is believed that they throw much light on the general magnitude and trend of this important factor in highway cost allocation in Ontario.

In the year 1913 the rural residents who had not as yet adopted the county road system, expended \$2.67 per head for roads; those within the county road system with a new road programme under way, spent \$3.39 per capita, but in 1918 this group spent only \$2.53 per capita. In 1924, after the motor car had been widely adopted, typical agricultural communities expended \$4.89 per capita for roads and in 1930, \$6.95. However, in 1935, with a road system basically complete, and expenditures reduced to the minimum on account of hard times, expenditure for these communities averaged \$2.97 per head. All the above amounts are exclusive of provincial grants.

It is probable that expenditures in 1924 and 1930 were affected by the then existing high costs of living, but in large part the increase represents a local assumption of some measure of the obligation to provide for traffic not purely local in its nature. The Commission is of the opinion that at the present time \$3.00 per capita per annum is a probable indication of the social-necessity value of roads to the rural population.

A corresponding examination of the per capita expenditures on urban streets of representative Ontario cities of moderate size for the three five-year periods extending from 1905 to 1919, before the motor vehicle came into extensive use, indicates that these expenditures averaged \$3.00 per capita per annum, within a range of a few cents either way. In 1935-36, when expenditures were at rock bottom due to the depression, but with motor vehicle traffic undiminished, the amount expended on urban streets and roads averaged \$2.28 per capita per annum.

It consequently appears that a fair range of the social-necessity value of roads and streets in Ontario, other than for motor vehicles, would be between \$2.00 and \$3.00 per capita per annum. There is also indication that minimum social-necessity requirements tend to be greater in rural communities than in urban areas. To assume that social necessity bears equally on all residents of the Province would appear to be somewhat to the advantage of the general taxpayer in rural areas.

It is interesting to compare the finding that the social-necessity obligations of the community would be met by an expenditure of approximately \$3.00 per capita per annum on roads with the general conclusion arrived at by the Royal Commission on Transport that one-third of the cost of roads should be assessed against the public at large,⁵ and the conclusion of the Royal Commission to Inquire into Railways and Transportation in Canada to the same effect.⁶

⁵Report, London, 1931, Art. 249, p. 70.

⁶The so-called "Duff Report," Ottawa, 1931-2, Art. 170, p. 57.

From Table 12.9 it is seen that the total expenditure made by the Provincial Government and the municipalities on roads and streets from November 1, 1918, to March 31, 1937, was \$659,973,364. In the same period the social-necessity obligation of the municipalities, which was \$3.00 out of every \$5.44 per capita expended by them (Art. 8.2), amounted to \$179,279,202. This sum is 27.2 per cent. of the total expenditure by all public authorities in the Province, and, it is interesting to note, does not differ markedly from the 33.3 per cent. suggested by the two earlier Commissions.

No consideration has been given in the above to expenditures on roads prior to November 1, 1918, nor to their value at that date, nor to Dominion subsidies expended on them, nor to the fact that municipal expenditures since the date mentioned on both rural and urban roads in excess of the social-necessity requirement must be treated as a subsidy to motor vehicle operations, as set out in Chapt. VIII. Such excess municipal expenditure represents an additional 22.1 per cent. paid by the general taxpayers, rendering the burden on them 49.3 per cent. of the total expenditure on roads and streets in the Province for the fiscal years 1919-1937.

13.6—General Principles. From these general considerations, the following principles would appear to emerge:

(1) That an obligation rests on the local community benefited to supply itself with the minimum road accommodation serving prime social needs.

(a) That at any given time the cost of meeting the social-necessity requirements for roads is a reasonably uniform cost per capita irrespective of the community.

(b) That the obligation of any local group or community to supply itself with roads is not affected by the method by which such is accomplished, whether it be by statute labour, general tax rate, local improvement, original owner's beneficence, or in any other way.

(2) That such community obligation does not release the Government from assisting by special grant, or otherwise, a weak community to obtain and maintain with the rest of the people of the Province, the facilities for communication essential to civilization, sound policy or good economics, whether provided by rail, water, highway or air, and irrespective of where it may be situated in the Province or whether it be in rural or in urban surroundings.

(3) That any road or road system above the minimum demanded by social necessity is an obligation on other than local traffic. Such traffic is wholly motor traffic. The motor vehicle is ubiquitous and motor traffic is a fluid which takes the channel offering least resistance to its flow. The entire cost of developing roads wherever situated, above the minimum social-necessity standard, is properly chargeable to the motor vehicle at large.

13.7—Suggested Basis for Dealing With the Annual Social-Necessity Obligation. In order that the motorists of the Province may be relieved of that portion of the cost of the roads that properly pertains to social-necessity uses, practical means will need to be devised for dealing with the problem. The Commission believes that their essential characteristics should be:

(a) Recognition of the principle that all roads and streets within the Province have a right to some measure of provincial support, in view of the fact that they are all open to provincial traffic and motor revenue is derived from vehicles operating anywhere upon them.

(b) Assurance that every municipality pays the same relative amount towards the roads of the Province and that none is relieved of its fair share of social-necessity obligation because of a possible predominance of provincial highways within it.

(c) Assurance that the motorist pays a proportion of the cost of every road or street he uses.

As a means of ensuring a division of annual cost of the public roads in accordance with the foregoing principles, the Commission would offer the following suggestions for dealing initially with the problem:

(1) The Department of Highways would continue to assume complete control and responsibility for King's Highways and provincial secondary roads. To a great extent King's Highways will by-pass towns and cities, and, to as great an extent as is financially practicable, be grade separated. If cities and towns cannot be conveniently by-passed, it may be necessary ultimately to provide completely grade-separated express highways through them.

(2) In the meantime, in equity, the Department would assume the cost, or a share of the cost, in proportion to the jurisdiction exercised, of the construction and maintenance of connecting links through cities and separated towns, as well as through non-separated towns and villages.

(3) The Department would not only continue to grant subsidies to townships and counties toward the cost of road construction and maintenance done in conformity with the annual programme of work approved by it, but would extend the principle to cities and non-separated towns at as early a date as practicable.

(4) In view of the more highly organized administrative machinery of cities, it would seem more convenient to grant each city a specific subsidy determined each year, based on an agreed amount per capita or otherwise, than to have a specific list of road work approved annually to the cost of which the Department would contribute. The annual subsidy would be expended by the city on traffic relief routes, whether these were classified as provincial highways or not.

(5) As a result of the assumption by the Province of 100 per cent. of the cost of the King's Highways and secondary roads, it is possible that all, or a majority of, the main arteries of travel in a municipality might become King's Highways, or provincial secondary roads, while the social-necessity needs of the local municipality continued to be served by them, without need of other roads. In these circumstances it appears proper to the Commission that if the full quota for social-necessity obligation could not be properly spent on roads continuing under the jurisdiction of the local municipality, or in which it had an interest, the balance of the quota should be payable to the Province in consideration of the social-necessity use made of the King's Highways and provincial secondary roads within the municipality. If there were no King's Highways, secondary roads or connecting links within such municipality, this provision would naturally not apply.

Deductions from any subsidy payable by the Province to a municipality would be made to the extent that the annual net amount that would be expended by such municipality on account of roads, if such subsidy were to be paid in full, fell short of its social-necessity quota.

If, for the purposes of illustration, the social-necessity value were set

at \$3.00 per capita per annum and the total per capita expenditures for roads by a township, including the county road levy, were \$7.00 per capita, the Province would, under present regulations, ordinarily undertake to pay \$3.50 of this amount and the township would absorb the remainder. If, for any reason, the total were only \$5.00, the Province would undertake to pay \$2.50, but since the township's share would be 50 cents less than the social-necessity quota, this amount would be credited back to the Province, leaving a final outlay of \$3.00 per capita on the part of the township.

(6) The social-necessity quota, or the minimum amount that must be expended annually on roads by every municipality within the Province out of non-motor revenue for local social needs, is, upon the basis of the tentative studies of the Commission, approximately \$3.00 per capita. The Commission believes that in practice, the actual quota could be arbitrarily set from time to time by the Government at a figure not greatly differing from the amount mentioned.

Local expenditure which might be offset against the per capita quota obligation would be for road work paid for outright, or the carrying charges on works financed over a period, or for any work of a character and purpose acceptable to the Department.

(7) The Minister might properly be empowered to grant, at his discretion, subsidies in excess of the usual 50 per cent. under exceptional circumstances, and on such conditions as may be deemed fit in the particular circumstances. In fact, this is but an alternative to the assumption of any road by the Department as a King's Highway or provincial secondary road.

SECTION 2—ALLOCATION OF ANNUAL COST AMONGST THE VARIOUS CLASSES OF MOTOR VEHICLES

13.8—General. Once the annual cost of the highways of the Province and the share of it that is to be borne by the owners and operators of motor vehicles has been determined, there immediately arises the further problem of allocating these costs equitably amongst the various classes of motor vehicles.

Several bases of allocation have been considered, all of them predicated upon one or more phases of the demands that they make on the highways. Those which are most fundamental and most frequently considered are (1) vehicle-miles, (2) road occupancy, (3) vehicle weight, and (4) ton-miles. The first two pertain only to use, the third only to load-resisting capacity and the fourth to a combination of use and load-resisting capacity. The measure of applicability of any one of these will not, in general, be the same for maintenance as for construction.

13.9—Basis of Vehicle-Miles. Allocation on the basis of vehicle-miles involves the assumption that, for the same distance of travel, a heavy vehicle makes no more demand in respect of the highway and its facilities and conveniences than does a light vehicle. Such is true for many road elements, for example, right-of-way, fencing, grading, drainage, road signs and signals, but it is not true of the pavement or surfacing. The popular view that, other things being equal, heavy vehicles make more exacting demands on the pavement than do light ones is correct. It is also correct when applied to the highway as a whole, but is erroneous when applied solely to road elements other than the pavement or surfacing.

13.10—Basis of Road Occupancy. *The Volume-Time Relation.* Occupancy of the highway increases with the volume of the vehicle, the slowness

of its movement and its annual mileage. The vehicle may be said to enjoy a moving tenancy, involving not only the area of the road surface but also height, interference with vertical visibility being a form of occupancy. Manifestly, large volumes and long duration of occupancy would give ground for representations on the part of other road users that large, slow-moving vehicles should pay more for the construction and maintenance of highways than those demanding less in this respect.

The standard for the measurement of road occupancy employed by Messrs. Breed, Older and Downs⁷ has some merit, but it properly applies only to vehicles travelling at such short distances apart that the length of vehicle would affect the permissible spacing and the vertical visibility. The method involves setting up a factor which is equal to the volume of the vehicle multiplied by the time required for this volume to displace itself along the highway.

On the assumption of the proposers of the method that the annual mileages of the average passenger car, the average truck, and the maximum truck and trailer combination permitted on the highways of Ontario are 6,300, 16,000 and 26,000 miles, respectively, and that the speeds are the same for all vehicles considered, the road occupancy of the truck is 21 times, and that of the truck and trailer combination 167 times, that of the passenger car. The disparity is still greater if the truck and the truck and trailer combination move at slower speeds than the passenger car.

Obviously, the relative road occupancy demands of ordinary passenger cars and the larger vehicles cannot be evaluated wholly by application of the above-mentioned method. Some consideration must be given to the spacing of the moving vehicles. Moreover, a rating schedule for road occupancy would need to take account of the relative number of vehicles of different sizes. For example, if there were only one-tenth as many trucks as there were passenger cars using the highways, the road occupancy factors would require to be weighted in the ratio of one to ten.

In the absence of any acceptable method of rating road occupancy, the Commission is not prepared to go further in the matter than to recognize that very different, although indefinite, demands exist by virtue of variations in the volume-speed relation. Sight should not be lost of this fact when an allocation of road costs is being made on any other basis.

Effect of Vehicle Width and Speed on Required Pavement Width. While road occupancy proper is a matter that concerns merely the presence of vehicles on a travelled way of existing width, there is the further and highly important matter of the influence of the desired occupancy on pavement widths yet to be determined.

Strongly contrasted representations were made before the Commission concerning the influence of especially wide vehicles on pavement width and on the cost of the highways. On behalf of the Railway Association of Canada, it was represented that roads adequate for vehicles of the maximum permitted width of eight feet must be from two to four feet wider than those required for passenger cars, which necessitates additional cost for the extra width of pavement, grading and bridges.⁸ Moreover, it was represented that the increase in the amount of mixed traffic was a major cause for the progressive widening of traffic lanes in Ontario and the change from two-lane to multiple-lane roads.

⁷Report on Annual Highway Costs, Province of Ontario, February 21, 1938, p. 115.

⁸*Ibid.*, p. 101.

It was estimated that 10 per cent. additional width of pavement is required by wide commercial vehicles and that the increase in cost is about 20 per cent.⁹

At the same time, it was stated that the heavier vehicles would necessitate excessive shoulder maintenance, rising at least as fast as the square root of the wheel load.¹⁰

In support of this view it was represented in argument that any failure to provide for mixed traffic whatever clearance might be found necessary between approaching and passing passenger cars would seriously reduce the operating factor of safety on the highway.¹¹

The study of the effect of pavement widths upon motor vehicle accidents made by Professor R. L. Morrison, of the University of Michigan, was cited in opposition to the above-mentioned views.¹² This investigation reported the number of accidents recorded during a given period on pavements of different widths in the State of Michigan and the conclusion was reached that wider pavements were needed more because of passenger automobile accidents than because of accidents in which large trucks or buses were involved.

Examination of the paper reveals, however, the fact that the relative numbers of passenger cars and commercial vehicles were not determined, so that the exposure ratio was unknown. Manifestly, if there were ten times as many passenger cars as trucks and buses using the highways under consideration, the exposure to accident would be ten times as great for the former as for the latter. Comparison of the total number of accidents occurring to a large number of passenger cars with a small total number of accidents occurring to a relatively small number of commercial vehicles is devoid of value.

Conclusions reached by the Highway Cost Commission of the State of Washington¹³ were cited to the effect that increased passenger car speeds are the controlling factor in the demand for wider highways.

In submissions made by the Ontario Road Builders' Association,¹⁴ it was represented that, primarily, the enormous increase in the number of passenger vehicles, increasing speed and the large number of inexperienced drivers with an appalling list of accidents, necessitated the adoption of safety measures, amongst which was increased width of traffic lanes. The tourist traffic in Ontario was cited as an important influence in this regard, involving, as it often does, extreme congestion on certain highways at week ends.

In assertions, freely made in argument, that the width of the roadway is determined almost wholly by the high operating speed of passenger cars, there was complete neglect of the fact that a large percentage of trucks and buses travel at a speed quite as high as that of passenger cars. Any one who has tried to pass them on the highway is made fully aware of that circumstance. If there be a speed hazard in respect of passenger cars to be overcome by widening of the roadway there is a still greater hazard, vehicle for vehicle, to be overcome in respect of trucks and buses.

An indication of the reduction in the operating factor of safety may be obtained by comparing the normal clearance of two ordinary passenger cars on an 18-ft. pavement with that existing when the car passes a truck 8 ft. wide,

⁹*Ibid.*, p. 68.

¹⁰*Ibid.*, pp. 71, 104.

¹¹Evidence, p. 9762.

¹²Proceedings, 14th Annual Meeting of the Highway Research Board, December, 1934, p. 69.

¹³Report, January, 1935, p. 44.

¹⁴Brief, pp. 4-5.

each moving with its usual transverse placement. According to Messrs. Breed, Older and Downs, these clearances are 3.6 and 1.8 ft., respectively.¹⁵ If it be considered that the clearance of 3.6 ft. ensures complete immunity from "side-swiping" and that zero clearance means certain accident, then for a clearance of 1.8 ft. the factor of safety has been cut to one-half of its proper value.

Attempts to appraise the relative weight of the influences that have brought about the increase of the width of the highways of Ontario to their present width cannot result in any preciseness of conclusion. Nevertheless, the Commission is of the opinion that the sense of strain widely expressed by drivers of passenger cars when attempting to pass wide, fast-moving commercial vehicles, has very materially affected the public attitude towards them and that the opinion so created has had a much greater influence on road policy, so far as it concerns the width of travelled way, than might appear from a consideration of nothing more than the relative numbers of wide vehicles operating on the highways of the Province.

An approximate allocation of the cost of additional width of pavement required for wide vehicles might reasonably be made by considering relative hazards. As has been pointed out, the factor of safety against sideswiping is reduced by one-half when a vehicle of the maximum permitted width is passed by an ordinary motor car. In other words, the hazard is doubled. For a vehicle having a width midway between that of an ordinary passenger car and the widest vehicle permitted, the hazard is 1.33 times that associated with the passenger car. It would consequently appear fair to assess against the group of wider-than-normal vehicles about $1.33/2.33 = 0.57$, or approximately 60 per cent., of the cost of the extra width of pavement over and above that formerly found adequate. In the hard-surfaced pavements the extra width would be two feet, since the operating factor of safety for ordinary motor cars is as great for an 18-ft. pavement as it is for mixed traffic passing along a 20-ft. pavement.¹⁶

13.11—Vehicle-Weight Method. *Factors Determining Pavement Thickness.* Not unnaturally, the thickness and cost of the surfacing or pavement of a roadway is regarded by the general public as dependent on the weight of the vehicles passing over it. Other things being equal, it is true that the heavier the vehicle the thicker and stronger must the pavement be.

In written submissions and in argument on behalf of the Ontario Road Builders' Association, Gray Coach Lines, Ltd., and the Ontario Association of Motor Coach Operators, representations were made to the Commission that in Ontario, where the temperature often drops to 20 or 30 degrees below zero in winter, with destructive heaving and sagging effects on road surfaces and pavements, the design of the pavement is not determined by weight at all, but by climatic conditions.¹⁷ Instances were cited of pavements that had suffered severe damage due to such effects, despite the fact that little heavy traffic had passed over them.¹⁸

So much trouble has been experienced from the reduced supporting power of softened subgrades and disruptive effects of frost that it was not difficult for counsel to cite opinions of engineers and road administrators to the effect that no reduction of pavement thickness would be approved by them even if trucks and buses were eliminated entirely from the highways.¹⁹ Close examination of these statements, however, leads the Commission to the belief that the

¹⁵Report on Annual Highway Costs, Province of Ontario, February 21, 1938, p. 97.

¹⁶*Ibid.*, p. 97.

¹⁷Evidence, pp. 8978, 8983, 9050, 9056, 9059, 9090, 9091.

¹⁸Evidence, pp. 9059, 9122.

¹⁹Evidence, pp. 8974, 8978, 9092.

widespread demand for thick pavements has arisen primarily from the effort to meet adverse water and frost conditions by increased weight and strength of the pavement, rather than by giving special attention to the foundation upon which the pavement rests. While the latter method may involve increased costs of construction, the maintenance costs should be lower.

In argument before the Commission it was repeatedly stated, in effect, that the only present way to obtain security of the pavement against disruption through the action of water and frost is by increasing the thickness of it beyond that required for the supporting of wheel loads.²⁰ The method appears, on the whole, to have been effective in Ontario, but the efficacy that it has shown arises largely from the improved resistance to wheel loads when the pavement is deprived of adequate support by the softening of the subgrade or by the lifting of a portion of the pavement off its support. That the demand on the pavement in this condition in respect of thickness is closely proportionate to the square root of the wheel base was not successfully disputed in the hearings.

An indication of the fact that the real threat to the pavement is associated with loading, and not with temperature or moisture effects in themselves, is found in the restricted loadings enforced on certain highways of the Province in the spring and in the fact that relatively thin pavements or surfacings are sometimes found adequate, provided they are not under traffic throughout the year.²¹

It should be pointed out in this connection that the extensive series of tests on the effects of changes of temperature in roadway slabs carried out over a period of three years by the United States Bureau of Public Roads disclosed little benefit from the thickening of the slab, so far as warping or other temperature effects in the slab itself were concerned.²²

Relation of the Cost of Pavement to Vehicle Weight. In Ontario, as in many other jurisdictions, the relation of the cost of a roadway pavement to vehicle weight has been much obscured by the practice of guarding against the destructive effects of moisture and temperature variation by thickening of the pavement. There was nevertheless general agreement in the submissions made to the Commission that in the design of pavements, as in the design of any other structure resting on the soil, the first consideration is the securing of a stable foundation.

Until recently, there was much doubt concerning the proper manner of dealing with the situation. As a result of extensive work in the field of soil mechanics during the past ten years, however, means of obtaining a high degree of stability in pavement foundations have been established. Mr. W. B. Hutcheson, District Engineer, Ontario Department of Highways, has very succinctly stated the new attitude to the problem thus²³:

"The study of soils and the principles of subgrade moisture control has shown the necessity for careful subgrade and foundation design and has indicated quite clearly how stable foundations can be permanently obtained by following simple basic rules. This study of subgrade design has received increased impetus from the fact that even the most expensive pavements rapidly deteriorated when constructed over inferior subgrades and the further fact that proper preparation of subgrades, obtained usually at reasonable costs, reduced the necessity for massive design of pavement of whatever type selected."

²⁰Evidence, pp. 9054, 9060, 9100.

²¹Evidence, p. 8984.

²²Public Roads, Nov., 1935, p. 169; Dec., 1935, p. 201.

²³Canadian Engineer, September 13, 1938, p. 96.

Speaking of frost heaving and allied effects, Mr. Charles E. Beland, of the Quebec Department of Highways, has expressed a similar view²⁴:

"Many engineers wrongly thought that the best way to meet these problems and to remedy the inequalities of the subgrade was to build high-type rigid and flexible pavements. The early failure of the expensive roads showed them clearly that although the pavement construction was checked by rigid formulas, the foundations were still unknown variables they had to account for."

It is apparent that if unyielding foundations for pavements are secured by an application of modern soil technique, the pavements themselves can be more scientifically designed and, since climatic effects would be largely eliminated, they might be made thinner. The conditions then determining the design have been accurately stated by Messrs. Breed, Older and Downs.²⁵ For either a rigid or a flexible pavement the thickness would then be closely proportional to the square root of the maximum wheel load.

From the foregoing considerations it is evident that the only proper way of determining the allocation of cost to vehicles of different weights is to add the cost of stabilization of subgrade to the cost of the other elements of the highway that are not affected by vehicle weight and to divide the cost of the pavement then found necessary amongst vehicles on the basis of the square root of the maximum wheel load.

Cost of Subgrade Stabilization. With a view to separating the costs of highway construction and maintenance that are affected by the weight of vehicles from those not so affected, an effort was made to ascertain what average expenditure per mile would be required for such degree of stabilization of road subgrades as would render it unnecessary to make special provision in the thickness of surfacing or pavement for the effects of moisture and temperature changes, including the heaving and sagging effects of frost action. Stabilization, in general, consists of the interposition between the paving and the soil upon which it is to rest of a layer or blanket of porous material of low capillary properties. Covered drains, as a supplementary measure, may or may not be used. Characteristic stabilizing construction is shown in the bottom cross-section of Fig. 1.

Based on a study of subgrade stabilization practice in the Provinces of Canada and in the border States made by the Commission, it would appear that the cost of generally adequate stabilizing measures for a 20-ft. roadway should not be more than \$8,000 per continuous mile. Since probably one-quarter of the mileage of new construction would not require stabilization, the cost applied to the entire mileage of new work should not be over \$6,000 per mile.

Possible Reduction in Pavement Costs When Subgrade Stabilized. Given a good bearing power and freedom from the disruptive effects of water and frost the pavement or surfacing may be comparatively thin for ordinary passenger cars and light trucks. Its thickness would need to be increased for heavier vehicles in the proportion to the square root of the maximum wheel load.

As was pointed out by Messrs. Breed, Older and Down,²⁶ passenger car owners in great numbers regularly drive over 4-in. sidewalks to and from their garages year after year without any damage being done. The case was also cited of the passage of about one million taxicabs and official cars over a considerable length of 4-in. sidewalk at the World's Fair, Chicago, during the

²⁴*Ibid.*, p. 108.

²⁵Report on Annual Highway Costs, Province of Ontario, February 21, 1938, pp. 48-65.

²⁶*Ibid.*, p. 55.

season of 1933, without any appreciable damage to the sidewalk. It is a matter of common knowledge that the regular passage of heavy trucks over sidewalks or thinly-paved lanes will ruin them in a few days.

An instance of the sufficiency of a thin surfacing when a stable foundation exists is that of the highway between Callander and the Dafoe Hospital, for which a 2¼-in. plant mix was placed on sandy and rocky subgrade. It has been in service for two years and, although accommodating thousands of cars daily in summer, is in excellent condition.

Without mention of any special precautions to be taken in respect of the subgrade, competent authorities have gone on record to the effect that the pavement thickness might be diminished if there were no heavy trucks or buses operating over it.

Mr. T. H. MacDonald, Chief, United States Bureau of Public Roads, was quoted in argument to the effect that pavements would need to be 15.4 per cent. thicker for a 7½-ton truck than for ordinary passenger cars and farm trucks.²⁷

According to Mr. F. Lavis, Consulting Engineer, New York, if there were no heavy vehicles at all, one or possibly two inches in the thickness of concrete slabs might be saved, although, he states, the evidence is not conclusive. The saving in first cost of pavements would possibly be \$2000 to \$4000 per mile.²⁸

A quoted statement of Mr. A. W. Brandt, Commissioner of Highways, State of New York, indicates that while concrete pavements of a uniform thickness of 9 in. are used in the neighbourhood of New York City, where trucking is especially heavy, one as thin as 7 in. might be used if there were no trucking.²⁹

Mr. E. G. Sumner, of the Connecticut State Highway Department, has stated that if the highways were restricted to the use of pleasure vehicles, standard concrete pavements of eight or nine inches in thickness might be reduced to seven inches.³⁰

The Highway Cost Commission, State of Washington, concurs in the opinion of its engineers that concrete pavements would be constructed 7½ in. thick at the edge and 5 in. thick at the centre if provision were to be made for passenger cars and light trucks, as compared with 9 or 10 in. at the edge and 6½ or 7 in. at the centre. The average reduction in cost of the pavement would be 20 per cent.³¹

Summarizing the replies obtained from thirty-six state highway engineers, the Washington Commission found that if only passenger cars and light trucks were to be provided for, the average thickness of concrete pavements might be 7½ in. at the edge and 6 in. at the centre, with a reduction of 10 per cent. in cost. The cost of flexible pavements would be reduced 7 per cent.³²

There is no indication that these opinions were based on the assumption that subgrades had been given special stabilizing treatment. Provision against water or frost effects appear to have been made largely, if not wholly, in the adopted thickness of the pavement. Had the probability of heaving and sagging been largely eliminated by stabilization of the foundation, the reduction of thickness

²⁷Evidence, p. 8973.

²⁸Proceedings, Fourteenth Annual Meeting Highway Research Board, December, 1934, p. 108.

²⁹Evidence, p. 9092.

³⁰Evidence, p. 9093.

³¹Report, January, 1935, p. 48. Evidence, p. 9074.

³²Report, January, 1935, p. 160.

made possible by designing for only passenger cars and light trucks would doubtless have been substantially more than has been indicated in the preceding six paragraphs. Moreover, it is possible that costs might have been materially reduced by employing an entirely different, and less expensive, type of construction.

Portion of Highway Cost Affected by Weight of Motor Vehicles. In any attempt to allocate amongst vehicles of different weights that portion of the cost of construction and maintenance of highways that should be borne by motor vehicles, it is necessary at the outset to determine the fraction of the annual highway cost that is affected by the weight of vehicles.

Manifestly, the latter does not in any way affect, either under the head of construction or that of maintenance, the cost of right-of-way, fencing, clearing and grading, drainage, road signs, lighting or signals. In other words, only the pavement or road surfacing is affected by vehicle weight.

For purposes of allocation of construction costs it is therefore necessary to ascertain what fraction of the total cost per mile of any type of highway considered is represented by the cost of the pavement or surfacing.

Considering the relative expenditures on the King's Highways for different classes of construction during the past 15 years, it appears that approximately 50 per cent. of the cost of a highway with stabilized subgrade would be affected by the weight of vehicles using it. If this proportion be adopted, the principle of cost allocation according to the square root of the maximum load would be applicable to 50 per cent. of the annual capital expenditure and the remaining 50 per cent should then be allocated in accordance with some other principle.

A useful guide in determining the fraction of the cost of maintenance of highways that is associated with the pavement or road surfacing is contained in an analysis of the cost of maintaining the King's Highways in Southern Ontario for the period 1933-1937, inclusive, filed with the Commission. Pavement maintenance included patching, surface treatment and tarring cracks, while other maintenance included weed cutting, snow removal, sanding and the upkeep of signs, wig-wags and snow fences.

For the period mentioned, the cost of pavement maintenance for paved roads constituted 35.6 per cent. of total maintenance on such roads; for all roads, paved or not paved, the maintenance of surfacing represented 47.3 per cent. of the total maintenance.

In view of the fact that a disturbance involving a given area of a foundation upon which a pavement or surfacing rests brings about a condition wherein the probability of failure is proportionate to the wheel load for rigid slabs and to a quantity somewhat less for flexible pavements, it is very conservative to say that for all surfaced roadways the cost of maintenance is proportionate to the square root of the maximum wheel load. If all types of roads be comprehended, a fair general approximation would be to consider the maintenance cost as in accordance with the square root of the maximum wheel load for 40 per cent. of the annual maintenance, apart from the costs associated with headquarters staff and administration. The latter, for the provincial highway system, currently represents about 20 per cent. of the total annual net ordinary expenditure.

In Fig. 7A, the position of lines 1 and 2 indicates that the general trend of maintenance and administration cost to the Province from 1919 to date has shown it to be about one-third of the total annual cost on a deferred-payment

basis. In Table 12.11 it will be seen that ordinary expenditure during the past twenty years has totalled almost exactly one-third of capital expenditure.

Having regard to the foregoing, it may be shown that if the number of vehicles in each class be considered the same, about 45 per cent. of the total annual cost of construction, maintenance and administration combined for the complete highway should be allocated in accordance with the square root of the wheel load, whether the financing is done on the deferred-payment plan or on the pay-as-you-go plan.

13.12—Ton-Mile Method. Since the demands made by vehicles on the highways are in part proportionate to the annual mileage and in part to the square root of the maximum wheel load, the ton-mile unit would appear to possess merit as a basis for the allocation of highway costs. A practical difficulty in applying it is the determination of the number of ton-miles operated annually. In the complete absence of any information of this kind in the records of the commercial motor vehicle operators in Ontario, the only way in which the method could be applied would be to assume an average annual mileage and an average load factor for each class of vehicle utilizing the highways.

Since for a highway with a stabilized foundation the thickness of pavement is based on the demands of the heavier vehicles, the ton-mile method is open to further objection that the lighter vehicles would be called upon to pay for facilities that they do not require. They would be overcharged, while the heavy vehicles would be undercharged, since there are too few of them to produce their fair share of the cost.

13.13—Cost Allocation Depends on Weighting of Many Factors. So many factors require to be considered and given their due weight that a strictly scientific basis of allocating the costs of the roads to the different classes of vehicles has so far not been established. The Commission has examined carefully all of the methods mentioned in the submissions and in the literature of the subject and cannot fully endorse any of them.

The circumstances that require to be considered in any attempt to arrive at a proper basis, as already pointed out, are as follows:

(a) *Vehicle-Miles.* Certain privileges and conveniences are enjoyed for every mile operated by all vehicles alike, regardless of weight, size or speed. Such would be the right-of-way, fencing, grading, drainage, road signs and signals. (Art. 13.9).

(b) *Road Occupancy.* The moving tenancy of the highways enjoyed by vehicles should in some measure be proportionate to the volume, slowness of travel and annual mileage of the latter. (Art. 13.10).

(c) *Vehicle Width.* Vehicles of a width greater than normal appear to be responsible for about 60 per cent. of the width of pavement required in addition to that necessary for ordinary passenger motor cars and light trucks moving at the same operating factor of safety as the wider vehicles. (Art. 13.10).

(d) *Vehicle Weight.* Where a pavement or surfacing rests on a completely stabilized foundation, considerations of vehicle weight alone would lead to allocating about 45 per cent. of the total annual expenditure for construction, maintenance and administration in proportion to the square root of the maximum wheel load.

(e) *Ton-Miles.* This commonly employed standard for the measurement

of road use does not cover the relative demands of heavy and light vehicles on the pavement, since a heavy total tonnage may be moved by means of light vehicles.

(f) *Number of Vehicles in a Class.* What might appear to be an equitable method of allocation if there were the same number of vehicles in each class may entail an altogether impracticable assessment on individual vehicles in a small class.

13.14—Adopted Basis of Cost Allocation. After giving close study to all of the factors discussed in Art. 13.13 and attaching such weight to each as seemed proper in the circumstances, the Commission is convinced that approximately seven per cent. of the cost of construction and maintenance of the highways of the Province in their present average state of development is occasioned by the presence of vehicles that are heavier and wider than ordinary passenger cars and light trucks.

On this basis there should be collected in licence fees from the heavier and wider vehicles an amount equal to the average, or basic, fee plus an additional seven per cent. of the total annual highway revenue required, including motor fuel tax. The schedule of licence fees proposed in Art. 7.27 is in approximate conformity with this proposal. They are based on gross weight and increase more rapidly than the weight and size of the vehicle licensed.

The additions to the basic licence fee by no means represent the total annual costs for roads properly payable by each vehicle so licensed, but only a minor fraction of such cost. As pointed out in Art. 7.18, the Commission is of the opinion that the motor fuel tax represents the fairest basis of collecting the larger part of the proportionate amount payable by each motor vehicle for the annual costs of the roads it uses, and the tax necessary to accomplish this is discussed in Art. 7.26. However, the Commission desires to emphasize the fact that the licence fees and the motor fuel tax as suggested are not independent of each other. Passenger vehicles for hire, and freight vehicles for hire or not for hire, in order to pay their full obligation in respect of roads provided for their use should be called upon to pay the licence fees suggested in Table 7.3, of Chapt. VII, and the motor fuel taxes in Art. 7.26. In the opinion of the Commission, the proper share of the annual costs of the roads individually payable by all other motor vehicles would be met by the imposition of the recommended fuel taxes.

CHAPTER XIV

ACKNOWLEDGMENTS

14.1—To Those Giving Information. The Commission wishes to acknowledge its indebtedness to the many persons and organizations that either in evidence, in formal written submissions or in correspondence have supplied information essential to the inquiry. A list of witnesses appearing before the Commission is given in Art. A3.1, of Appendix A-III, and one of public bodies, organizations, associations and individuals making written submissions only is given in Art. A3.2.

Valuable assistance was received from various departments of the provincial Government through their co-operation in placing before the Commission in documentary form detailed replies to the many questions asked during the progress of the inquiry.

14.2—To the Staff of the Commission. The Commissioners wish to express formally their indebtedness to the individual members of the Commission staff:

To Mr. Dalton C. Wells, for his efficient and conscientious services as Secretary to the Commission;

To Mr. Joseph Singer, K.C., Counsel to the Commission, for the conspicuously able and impartial manner in which he brought out the evidence bearing on the matters under consideration;

To Mr. Norman D. Wilson, C.E., Engineer-Economist to the Commission, for painstaking statistical studies of many difficult questions and for placing at its disposal his thorough and comprehensive knowledge of transportation in its various forms.

APPENDIX A-III

A3.1—Alphabetical List of Witnesses Appearing Before the Commission.

- Mr. James A. Argo, Chief of Tariff Bureau, Freight Traffic Department, Canadian National Railways.
- Mr. Joseph Atkinson, Jr., Secretary-Treasurer, The Toronto Star, Ltd.
- Mr. James C. Barker, Secretary, Ontario Association of Motor Coach Operators.
- Mr. Melburn Belfry, Former Driver, Kingsley Transport, Orillia.
- Mr. William L. Bentley, Truck Driver, Employed by National Fruit and Produce Co.
- Mr. James Bowman, Stock Farmer, Guelph, Ont.
- Mr. George Brindle, Out-of-town Shipper, Jas. Lumbers Co., Ltd., Toronto.
- Mr. Fred Burford, Burford Transport, Picton, Ont.
- Mr. William R. Caldwell, Traffic Manager, Canadian Cannery, Ltd.
- Mr. Rutherford Caley, Superintendent Motor Transportation, British-American Oil Co., Ltd.
- Mr. George Carr, Carr's Transport and Movers, Toronto.
- Mr. David Caughell, Operator, C. and H. Transport, Waterloo, Ont.
- Mr. Melvin E. Clarke, Proprietor, M. E. Clarke Transport, Seaforth, Ont.
- Mr. Ernest C. Drury, Former Prime Minister of Ontario.
- Mr. Lionel Gordon Fabian, General Representative, Automotive Transport Section, Canadian Brotherhood of Railway Employees.
- Mr. Anton W. Foellger, General Passenger Agent, Michigan Central Railway.
- Mr. Robert Fulton, Former Driver, Whitworth Cartage, London, Ont.
- Mr. Jas. C. Glendenning, Manager, Tariff Bureau, Canadian Pacific Railway.
- Mr. Arthur E. Goodale, Former Operator, Goodale Transport, Ltd., presently with Crawford Cartage Co.
- Mr. Joseph O. Goodman, Executive Secretary-Manager, Automotive Transport Association of Ontario.
- Mr. David Gray, Accountant, Brown's Transport, Ltd., Guelph, Ont.
- Mr. Joseph Gutmann, Secretary-Treasurer, Smith Transport, Ltd., Toronto.
- Mr. C. Norman Ham, Traffic Manager, Canadian Pacific Express Co.
- Mr. Norman Harper, Sergeant of Police, Toronto Police, in charge of Motorcycle Squad.
- Mr. William Hayward, Chief of Tariff Bureau, Canadian Pacific Railway.
- Mr. Alex. Hewitt, Transport Operator, Minden, Ont.
- Mr. John H. Hiscox, Traffic Manager, T. Eaton Co., Ltd.
- Mr. John Edgar Hodgson, in charge Toronto Store Delivery Department, T. Eaton Co., Ltd.
- Mr. Arthur Houldsworth, Manager, Metropolitan Transport, Ltd.
- Mr. William Ingram, in charge of transportation, Swift Canadian Co., Ltd.
- Mr. George Roy Jones, Assistant to the General Manager, Canadian Pacific Express Co.
- Mr. Wilfrid J. Kingsley, Kingsley Transport, Orillia, Ont.
- Mr. Thos. H. Kinnear, Secretary-Treasurer, National Grocers. Ltd., Toronto.

- Mr. Charles LaFerle, Traffic Manager, Robert Simpson Co., Ltd.
Mr. Albert J. Litwin, Operator, K. and L. Motor Express, Ltd., Toronto.
Mr. James A. Machan, Division Freight Agent, Michigan Central Railway.
Mr. Wilfred H. Male, General Manager, Inter-city Forwarders, Ltd., and Colville Cartage Co., Ltd., Toronto.
Mr. Larkin Maloney, Vice-President and General Manager, Canada Building Materials, Ltd.
Mr. William Marks, Proprietor, Marks Transport, Brantford, Ont.
Mr. Stacey V. Martin, General Manager, Martin Transports, Ltd., Toronto.
Mr. Fred May, President, Ontario Movers' Association.
Mr. Raymond Morgan, Traffic Manager, Martin Transports, Ltd., Toronto.
Mr. Alexander McGregor, Secretary-Treasurer, Inter-city Forwarders, Ltd., and Colville Cartage Co., Ltd., Toronto.
Mr. Roderick P. C. McLeod, Assistant to General Freight and Passenger Agent, T. and N.O. Railway.
Mr. James McMaster, Driver, Kingsley Transport, Orillia, Ont.
Mr. Charles F. Needham, Assistant to Vice-President and General Manager, Central Region, Canadian National Railways.
Mr. W. E. Norton, Chief, Tariff Bureau, Canadian National Railways.
Mr. Morley J. Pape, Secretary, Automotive Transport Association of Ontario, and General Manager, Coville Transport Co., Ltd., Toronto.
Mr. George Parke, President, Toronto-St. Catharines Transport, Ltd.
Mr. Clarence P. Riddell, Secretary, Railway Association of Canada.
Mr. John Ritchie, Traffic Representative, Canadian Industries, Ltd.
Mr. George Rodanz, President, Direct Transport, Ltd.
Mr. Clayton Rogers, General Store Proprietor, Carnarvon, Ont.
Mr. Fred E. Rosebrough, Representative, Canadian Feed Manufacturers Association.
Mr. Frank Russell, Truck Driver, The Sage Transport, formerly with Whitworth Cartage, London, Ont.
Miss Allie Simington, Accountant, Marks Transport, Brantford, Ont.
Mr. Charles B. Sissons, Nelles Professor of Ancient History, Victoria College, Toronto, and Farmer, near Newcastle, Ont.
Mr. John Smart, Vegetable Grower and Fruit Canner, connected with Smart Bros., Ltd., Collingwood, Ont.
Mr. William Stockdale, Official of Department of Highways, Government of Ontario.
Mr. Gordon Strathdee, Operator, Strathdee Transport, Toronto.
Mr. Stuart Strathdee, Employee, Strathdee Transport, Toronto.
Mr. David G. Sturrock, Traffic Manager, Lever Bros., Ltd., Toronto.
Mr. David Sylvester, Traffic Manager, Wm. Winters Transport Co., St. Catharines, Ont.
Mr. Leslie Gordon Teakle, Secretary-Treasurer, Martin Transports Ltd., Toronto.
Mr. Jas. McLeod Thompson, General Freight Agent, Martin Transports, Ltd., Toronto.
Mr. Arthur H. Thorpe, President, Motor Express Terminals, Ltd.
Mr. Alex Walinck, General Storekeeper, Roches Point, Ont.
Mr. George Webster, Official, Dominion Truck Equipment Co., Ltd., Kitchener, Ont.
Mr. Frank Whitehouse, Delivery and Service Manager, Robert Simpson Co., Ltd.
Mr. Edward Whitworth, Proprietor of Whitworth Cartage, London, Ont.
Mr. Richard Winfield, Traffic Manager, British-American Oil Co., Ltd.

A3.2—List of Public Bodies, Organizations, Associations and Individuals Making Written Submissions Only.

(1) *Submissions in the Form of Briefs Only*

Affiliated Railwaymen's Organization of Ontario. (Ship by Rail)

The Board of Trade of the City of Toronto.

The City of Belleville.

The City of Brantford.

The Town of Brockville.

The Canadian Industrial Traffic League.

The Canadian Manufacturers Association, Incorporated.

Haldimand County Council (adopted Brief of Wentworth County Council).

The Hamilton Chamber of Commerce.

Joint Legislative Committee of the Railway Transportation Brotherhoods.

Kenora Board of Trade.

The City of London.

National Cannery Association of Canada.

The Ontario Agricultural Council.

The Ontario Association of Real Estate Boards.

The Ontario Chamber of Agriculture.

The Ontario Creamery Association.

The Ontario Good Roads Association.

The Ontario Motor League.

The Ontario Motor Truck Owners' Association.

The Ontario Municipal Association.

The Ontario Association of Rural Municipalities.

Mr. R. F. Parke, Toronto Storage and Transport Co., Ltd.

The Town of Renfrew.

The City of St. Thomas.

The City of Stratford.

The Toronto Cartage and Expressman's Association.

The Wentworth County Council.

(2) *Submissions by Municipalities in the Form of Resolutions Only.*

The Township of Balfour.

The City of Belleville.

The Town of Cache Bay.

The Town of Capreol.

The Town of Carleton Place.

The Township of Chapleau.

The City of Chatham.

The Town of Chelmsford.

The Town of Cochrane.

The Town of Cornwall.

The County Council of Elgin.

The Township of Freeman.

The Town of Gananoque.

The City of Guelph.

The Town of Harriston.

The County of Hastings:

Local Municipalities: Township of Bangor
Township of Sidney
Township of Tyendinaga
Township of Rawdon
Townships of Marmora and Lake
Deloro Village
Deseronto Town
Townships of Tudor and Cashel
Township of Limerick
Frankford Village
Township of Thurlow

The Municipality of Himsworth North.

The Town of Ingersoll.

The Town of Kapuskasing.

The City of Kitchener.

The Village of Long Branch.

The Town of Meaford.

The Town of Midland.

The Town of Napanee.

The Municipal Council of the United Townships of Neelon and Garson.

The City of Niagara Falls.

The Town of Oakville.

The City of Oshawa.

The City of Owen Sound.

The Town of Pembroke.

The Town of Perth.

The Town of Petrolia.

The Town of Prescott.

The United Townships of Ratter and Dunnet.

The Town of Rockland.

The City of St. Catharines.

The Townships of Salter, May and Harrow.

The City of Sarnia.

The City of Sault Ste. Marie.

The Town of Schreiber.

The Village of South River.

The Township of Springer.

The Town of Sturgeon Falls.

The City of Sudbury.

The Village of Watford.

The Township of West Ferris.

The Municipality of Widdifield.

The Town of Wiarton.

The City of Windsor.

APPENDIX A-VI

EXAMPLES OF HOURS, WAGES AND BENEFITS
IN THE MOTOR TRANSPORT INDUSTRY

A6.1—General. As an indication of the situation in the motor transport industry with respect to hours, wages and benefits granted, Tables A6.1 to A6.7, inclusive, have been prepared. These convey significant facts with respect to eighteen public commercial vehicle operators, ten private commercial vehicle operators and ten public vehicle operators (buses for hire). The operators selected were those from whom information was available in some detail.

While necessarily the tables have had to be made on the sampling basis, it is believed that they disclose a situation that is representative of the industry as a whole.

Table A6.1—Typical Hours and Wages of Drivers of Highway Trucks Operating for Hire in Ontario
(Public Commercial Vehicles)

Note—Benefits and deductions are generally applicable to all operations.
E975 signifies page 975 of the evidence.

Identif- ication Number of Employer (1)	Nature of Business and Licence (2)	Identif- ication Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
1	General haulage— Classes "A" and "C"	a	13 hrs. in 15-hr. spread, in- volving 5½ hrs. delivery, 2½ hrs. loading and 5 hrs. high- way driving (E2458-87).	Trip basis, normally paying min., \$20; max., \$24; weighted average, \$21.60 per wk.	Room supplied at far terminal but no meals.	
		b	9½ hrs. in 15-hr. spread.			
2	General haulage— Classes "A" and "C"	a	11 hrs. (7 on highway) in 12- hr. spread (E2823). Two or three times a month in busy season it might be 12 hrs. in 13-hr. spread, involving 7 hrs. driving plus 1 hr. rest plus 5 hrs. driving.	Trip basis, normally paying \$15 for driver of truck and \$18 for driver of tractor and semi- trailer per wk.	Room supplied at far terminal but normally no meals. Employer pays extra expenses due to storms, accidents, etc., plus 30 cents per hr. for delays. Men pay fines for speeding and negligence.	Time book entries of 20 hrs. in 22- hr. spread and 23 hrs. in 25-hr. spread questioned by employer.
		b	8 hrs. (5½ on highway) in 9-hr. spread.	\$15 per wk.		
		c	9 hrs. (8 on highway) in 10- hr. spread.	\$15 per wk.		
3	General haulage— Classes "A" and "C"	a	6½ hrs. (3 on highway) in 12-hr. spread.	Daily basis yielding \$18 per wk.		
		b	7 hrs. (3½ on highway) in 9-hr. spread.	Daily basis yielding \$18 per wk.		
		c	5 hrs. (all on highway) in 6½ hr. spread.	Daily basis yielding \$22.50 per wk.		
		d	5½ hrs. (3 on highway) in 5½-hr. spread.	Daily basis yielding \$18 per wk.		
		General	Time book shows many cases of 10 to 13 hrs. on duty.	Men paid \$3 per day even if they work only one hour. No overtime paid.		A highly exper- ienced driver.

Table A6.1—Continued

Identification Number of Employer (1)	Nature of Business and Licence (2)	Identification of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
4	General haulage—Classes "A" and "C"	a	10 hrs. (9 on highway) in 19-hr. spread (E2772-74).	Trip basis; \$15 to \$30; average, \$20.21 per wk.	No benefits.	Trip rate based on 50 cents per hr. for estimated necessary time.
		b	8 hrs. (5 on highway) in 8-hr. spread.	Trip basis; \$12 to \$24; average, \$17.85 per wk.	No benefits.	Trip rate based on 50 cents per hr. for estimated necessary time.
		c	12 hrs. (10 on highway) in 14-hr. spread.	Trip basis; \$18 per wk.		
		General		Average wages for drivers during 1937, \$18.87 per wk.		
5	General haulage—Classes "A" and "C"		Normal 10-hr. day and 60-hr. week; maximum week, 78 hrs.	Most of drivers on weekly basis; \$20 to \$24 per wk.; average about \$21. No payment for overtime and no deduction for short time.	No benefits. Men pay their own road expenses.	
		a	10 hrs. (7 on highway) in 10-hr. spread.	Trip basis; \$19.50 per wk.	Room only supplied at far terminal.	
6	General haulage—Classes "A" and "C"	b	12 hrs. (9 on highway) in 12-hr. spread for 2 men on double hook-up with sleeper cab. Average of 96 hrs. per wk. on duty for each of the two men has happened for series of weeks in busy season (E1823).	Trip basis; \$24 net per wk. plus a possible \$1.75 to \$2.50 if return load picked up <i>en route</i> .	Room supplied at far terminal with allowance for 2 meals per round trip.	Haulage of canned goods.
		General	No upper limit for hours. Half of employees work 70 hrs. per wk. from July 1 to Nov. 1. For 4 or 5 weeks continuously a number of drivers work 70 to 90 hrs. per wk. (E1846-7). Has permission to work on Sundays in morning each day.	For drivers not on trip basis, \$18-\$20 per wk.	Compensation for delay due to storms or accident. Employer pays 25% of cost of uniforms and provides free clerical work for group insurance.	

Table A0.1—Continued

Identif-ication Number of Employer (1)	Nature of Business and Licence (2)	Identif-ication Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
7	General haulage—Classes "A" and "C"		Normally 10 hrs. in 12-hr. spread, but might be 11 or 11½ hrs. One driver averaged 97 hrs. per wk. on duty for 13 weeks made up thus: 98¼, 85¾, 92, 107¾, 110¼, 102, 83¼, 97¾, 96½, 106, 97, 97, 85 (E2004). The first of these weeks made up of 24¼, 17¼, 12½, 16¾, 14 and 13½ hrs. (E2005). Generally, 3 or 4 hrs. daily spent in picking up, delivering and waiting for loads at far terminal. Total driving time about 8 hrs. Basic 60-hr. week seldom exceeded. Trips arranged to require 9 to 10 hrs.	\$15 to \$18 per wk. No overtime or deductions for short time. \$12 per wk.	Drivers paid own road expenses. Paid his own road expenses.	Married. 4 children.
8	General haulage—Classes "A" and "C"		Most drivers on trip basis, normally paying about \$25 per wk. A few drivers on daily basis, yielding from \$21 to \$25.50 per wk. Compensation for unavoidable delays. \$12 to \$20 per wk.; average, \$16.25 per wk.	Group insurance expense shared by employer. One week's holidays with pay. Caps free. Laundering of shirts and trousers (owned by laundry) shared equally by employer and employee.	Business has now been absorbed by another company.	
9	General haulage—Classes "A" and "C"	a	9 to 10 hrs. per day, 54 to 60 hrs. per wk., 11 hrs. max. at any time. 10 hrs. (10 on highway) in 17-hr. spread made up of 4½ hrs. on highway plus 7 hrs. rest plus 5½ hrs. on highway (E4802). 54 hrs. per wk., on average.	Generally, \$18 per wk.; a few paid \$20 per wk. No deduction for short time.	Room at far terminal and meals on road provided.	
10	General haulage—Classes "A" and "C"					

Table A6.1—Continued

Identif- ication Number of Employer (1)	Nature of Business and Licence (2)	Identif- ication Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
11	General haulage— Classes "A" and "C"	a	10 or 11 hrs. on highway in 17-hr. spread, 6 days a wk. (E4690). 6 hrs. on highway.	\$15 per wk., with de- duction if less than full week worked.	Room supplied at far terminal, but no meals.	
		a	11 hrs. (10 on highway) in 12½-hr. spread for one driver and 10 hrs. in 13½-hr. spread for his alternate. (E2236).	\$22 per wk.	No contribution to in- surance except clerical services. No uniforms. Allowance for meals when on highway. Charges 10% on short collections.	
12	General haulage— Classes "A" and "C"	b	11 hrs. (7 on highway) in 12- hr. spread.	\$18 per wk.		
		c	9½ hrs. (8 on highway) in 11½ hr. spread. Average week, about 70 hrs.	\$18 per wk. Average wages, \$18.55 per wk. No overtime and no deductions for short time. Allowances made for breakdown or emergency.		
13	General haulage— Classes "A" and "C"		Running time on longer trips 11 to 14 hrs., only one driver being employed per unit or double hook-up. 80 to 90 hrs. per wk. required to make three or four return trips on the longest route (E959). 66 to 80 hr. per wk. not un- common.	Trip basis yielding \$22 to \$25 per wk. Full time average pay \$24.18 per wk. Compensation for de- lays due to storm or accident at 30 to 35 cents per hr. but none for waiting for loads.	Caps supplied free and uniforms at cost. No contribution to insur- ance except clerical ser- vices. Charge of 25 cents for advance on pay (now discontin- ued). Men pay own road expenses. Deduc- tions from pay for damages due to care- lessness.	

Identif-ication Number of Employer (1)	Nature of Business and Licence (2)	Identif-ication Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
14	General haulage—"A" and "C"		Normal driving time on longer trips 10 hrs. per day. 60 hrs. per wk. May take 11 to 11½ hrs. in bad weather.	Based on 60-hr. wk.; \$21 per wk. for experienced driver, \$19 for steady driver and \$17 for inexperienced driver. No pay for resting or eating time on or off vehicle. Overtime may be paid for <i>pro rata</i> or balanced by short time. Trips over 100 miles one way paid for on trip basis. \$2 per trip extra if in charge of double hook-up. Drivers of single hook-ups earn about \$23 to \$28 per wk., net; drivers of double hook-ups, \$29 to \$36, net. \$22 to \$32.50 per wk.; average, \$27.42.	\$5 minimum per wk. allowed for road expenses on certain runs. Room provided at far terminal for medium runs. No provision for uniforms.	
15	General haulage—Classes "A" and "C"	a	Maximum time on duty, 10 hrs.			
		b	Do.	\$17.50 to \$25 per wk.; average \$22.77.		
		c	Do.	\$21 to \$28 per wk.; average, \$23.75.		
16	General haulage—Classes "A" and "C"	General		Hourly basis, 35 to 49 cents per hr. for drivers of tractors and trailers and 35 to 39 cents per hr. for drivers of light trucks, the lower rate being paid for time waiting for load. Trip basis; over 50 cents per hr.		

Table A6.1—Continued

Identif-ication Number of Employer (1)	Nature of Business and Licence (2)	Identif-ication Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
17	Furniture mover— Class "H"	a	For drivers of tractors and trailers on runs over 150 miles, maximum hours per wk. for three random-selected months were 67, 79 and 84½ hrs. (E4876), the days of the latter being of 12½, 10, 14, 16, 16¼, and 15¾ hrs. Daily hrs. recorded up to 17¾.	Averages \$27.42 to \$30.75 per wk.		
			For drivers of tractors and trailers on runs less than 150 miles, no daily records of hours.	Averages \$20.43 to \$21.38 per wk.		
		c	Drivers of light trucks, maximum hours per wk. for three random-selected months were 75¼, 77 and 77¾ hrs.	Averages \$24.09 to \$25.34 per wk.		Where meals and lodging are required on road, these paid for by employer.
18	Furniture mover— Class "H"		18 hrs. max. for 2 men driving and resting alternately.	\$18 to \$27 per wk. of 54 hrs., with 35 to 50 cents per hr. for overtime. Weekly wages guaranteed. On long distance moving both men in van paid for total time of trip.		
			Standard week of 45 hrs.	Average minimum wages, \$21.38 per wk.		Meals and lodging provided when on road.

Table A6.2—Typical Hours and Wages of Pick-Up and Delivery (P. and D.) Drivers Employed in Connection With Commercial Motor Transport Operations in Ontario

Note: Benefits and deductions noted in Table A6.1 are here applicable.
E2776 signifies page 2776 of the evidence.

Identification Number of Employer (1)	Hours Worked (2)	Basis and Rates of Pay (3)	Remarks (4)
2	10 hrs. in 11-hr. spread.	Two drivers at \$12 per wk. in Toronto and Hamilton; two drivers at \$15 per wk. in Toronto and Owen Sound; spare man, 30 cents per hr. (E2434).	
3	Maximum of 11½ hrs. on duty; usually 8 or 9 hrs. of actual work.	Some on weekly and some on daily basis; \$18 to \$20 per wk.	
4	6 to 10 working hrs. per day; generally 45 to 60 hrs. per wk., although in summer months it may be 66 to 70 hrs.	Hourly rate 27 cents. One man receives \$12 per wk. plus personal use of truck. Highway drivers employed on P. and D. work receive 40 cents per hr. (E2776). Average wages for 1937, \$12.41 to \$14.80 per wk.	
5	Basic 10-hr. day and 60-hr. wk. Overtime compensated for by short time.	Generally, 30 to 48 cents per hr., average 38 cents. One driver at \$22 per wk. Average weekly wage \$18 to \$20 per wk. (E4358).	
6	10-hr. day; 60-hr. wk.	Hourly rate in home town, 25 cents per hr. (E1829). This rate was increased to 35 cents after the sittings of the Commission began.	
8	Basic 60-hr. wk. Usual maximum, 58 to 59 hrs.	One driver, \$18 per wk.; two at 35 cents per hr.; one part time, \$12 per wk. Average wage for October, 1937, about \$19 per wk.	
9	Basic 10-hr. day and 60-hr. wk.	Two drivers in Guelph, \$10 per wk.; drivers in Toronto, \$18 to \$20 per wk. (E4798).	
10	Average working week, 58 hrs.; sometimes work 75 hrs. per wk.	Daily rate; weekly earnings, \$15 to \$18. If man on duty at all, he is paid for full day.	

Table A6.2—Continued

Identification Number of Employer (1)	Hours Worked (2)	Basis and Rates of Pay (3)	Remarks (4)
11		\$15 per wk. for both Toronto and Seaforth. (E2043).	
12	For P. and D. operations in medium and smaller cities: 7½ hrs. in 10½-hr. spread, highway and P. and D. 7 hrs. in 12-hr. spread, highway and P. and D. 9½ hrs. in 13-hr. spread, highway and P. and D. 11 hrs. in 12-hr. spread, highway and P. and D. 11 hrs. in 12-hr. spread, highway and P. and D. 10 hrs. in 11-hr. spread, highway and P. and D. 9 hrs. in 11-hr. spread, highway and P. and D. 9 hrs. in 10-hr. spread, P. and D.	\$18 per wk. \$18 per wk. \$18 per wk. (E2250). \$18 per wk. \$17 per wk.; average \$13.60. \$18 per wk. \$18 per wk. \$10 per wk. (boys). Average wage paid, \$13.33 per wk.	
13	Basic day is 10 hrs. but is often exceeded. P. and D. men allowed to work in warehouse on Sunday if necessary. Feb., 1937, 63% of the days worked were over 10 hrs. June, 1937, 54% of the days worked were over 10 hrs. Oct., 1937, 55% of the days worked were over 10 hrs. —Driver A for 53% of the time worked over 10 hrs. and up to 12½ hrs. —Driver B for 90% of the time worked over 10 hrs. and up to 12¾ hrs. —Driver C for 83% of the time worked over 10 hrs. and up to 11¾ hrs. —Driver D for 83% of the time worked over 10 hrs. and up to 15¼ hrs. —Driver E for 83% of the time worked over 10 hrs. and up to 12¾ hrs.	Payment at a specified rate per pick-up depending on its weight. Average, 36 cents per actual hr. worked; \$3.47 per day; \$19.65 per basic 60-hr. wk. Average, 36½ cents per actual hr. worked, \$3.54 per day; \$20.70 per basic 60-hr. wk. Average, 35½ cents per actual hr. worked; \$3.54 per day; \$19.92 per basic 60-hr. wk.	This method of payment has since been discontinued. (E9356).

Table A6.2—Continued

Identification Number of Employer (1)	Hours Worked (2)	Basis and Rates of Pay (3)	Remarks (4)
	<p>—Driver F for 77% of the time worked over 10 hrs. and up to 15¼ hrs.</p> <p>—Driver G for 82% of the time worked over 10 hrs. and up to 13¼ hrs.</p> <p>One man worked 11 weeks continuously without a day off. (E3931).</p>		
14	Basic 10-hr. day and 60-hr. wk.	<p>For basic week, normal rates are: \$21 for experienced driver, \$19 for steady driver and \$17 for inexperienced driver.</p> <p>Actual average wages paid for Feb., 1937, \$20.40; for June, 1937, \$20.79; for Oct., 1937, \$20.37.</p>	
15	Maximum day, 10 hrs.	<p>In Toronto \$23 to \$24 per wk.; Hamilton, \$21; Windsor, \$22 to \$23; other cities, \$16 to \$19.</p> <p>Average weekly earnings, \$21.96.</p>	Since these submissions were made the hours of city drivers have been considerably reduced.
16	<p>Feb., 1937, for P. and D. duty exclusively, average week 61½ hrs.; maximum week, 74¼ hrs., including one of 18½ hrs.</p> <p>Feb., 1937, for combined highway and P. and D. duty, average week, 60¾ hrs.; maximum 76¼ hrs.</p> <p>June, 1937, for P. and D. duty, average week, 62 hrs.; maximum 75¼ hrs.</p> <p>June, 1937, for combined Highway and P. and D. duty, average week, 62 hrs.; maximum 87 hrs. (made up of 11½, 18¼, 18½, 12, 16½ and 10¼ hrs. (E4900C). Other men on duty 79½ hrs. and 79 hrs. (including one 19¼-hr. day).</p> <p>Oct., 1937, for P. and D. duty, average week, 62¼ hrs.; maximum, 70½ hrs.</p> <p>Oct., 1937, for combined highway and P. and D. duty, average week, 68½ hrs.; maximum, 79½ hrs.</p>	<p>Average weekly earnings, \$24.49.</p> <p>Average weekly earnings, \$23.34.</p> <p>Average weekly earnings, \$24.69.</p> <p>Average weekly earnings, \$24.14.</p> <p>Average weekly earnings, \$25.92.</p>	<p>Do.</p> <p>Do.</p> <p>Do.</p> <p>Do.</p>
19	54-hr. week.	\$18 per wk.	A motor terminal.

Table A6.3—Typical Hours and Wages for Warehouse and Platform Men Employed in Connection With Motor Transport Operations in Ontario

Note: Benefits and deductions noted in Table A6.1 are here applicable.
E4519 signifies page 4519 of the evidence.

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
2	P.C.V. Operator	10 hrs. per day in 11-hr. spread.	Toronto, \$12 per wk. Warehouseman-Bookkeeper at Owen Sound terminal \$15 per wk. (Brief).	
4	P.C.V. Operator	Loaders, 4 to 10 hrs. per day; about 48 hrs. per wk.; 8 months only.	27 cents per hr.; average weekly earn- ings, \$13.13. (Brief).	
5	P.C.V. Operator	Basic day, 10 hrs. Overtime com- pensated for by short time.	Most men on hourly basis of 30 to 45 cents per hr., average being 35½ cents. Some on weekly basis of \$18 to \$25 with average of \$21.83. (Payrolls).	
6	P.C.V. Operator	Basic 10-hr. day.	25 cents per hr. in a town; average earn- ings per wk., about \$15.	
8	P.C.V. Operator	Basic 60-hr. wk. Men generally on duty 65 to 75 hrs. per wk. but ac- tually work only about 54 hours. (E4519).	22 to 35 cents per hr.	Business has now been absorbed by an other company.
9	P.C.V. Operator	10 to 12 hrs. per day; 60 to 72 hrs. per wk.	\$15 to \$20 per week. Foreman \$25 to \$30 per wk. (Brief).	
10	P.C.V. Operator	Drivers sometimes work in ware- house after completing a run and draw extra pay.	\$15 to \$18 per wk. Foreman, \$24 per wk. (E4703).	
13	P.C.V. Operator	Feb. 1937, 55% of the days worked were over 10 hrs.	Three bases of payment: The wk., day, hr. Average pay per hr., 32½ cents; per wk., \$17.76; per basic 60-hr. wk., \$18.96.	

Table A6.3—Continued

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
		June 1937, 44% of the days worked were over 10 hrs. Oct. 1937, 54% of the days worked were over 10 hrs.	Average pay per hr., 34 cents; per wk., \$21.30; per basic 60-hr. wk., \$18.90. Average pay per hr., 32½ cents; per wk., \$20.82; per basic 60-hr. wk., \$19.40. (Brief).	
14	P.C.V. Operator	Basic 10-hr. day and 60-hr. wk.	Overtime paid for <i>pro rata</i> after 60 hrs. Experienced warehousemen paid \$21 per wk.; inexperienced ones paid \$17 per wk. (Brief.)	
15	P.C.V. Operator	Maximum day, 10 hrs.	In Toronto, \$18 to \$33 per wk.; in other cities, \$17 to \$27 per wk. (Brief.)	
16	P.C.V. Operator	Nominal 10-hr. day but for random- selected months of February, June and October, 1937, warehousemen were on duty up to 77%, 79 and 73 hrs. per wk., respectively. (Brief).	Regular staff on weekly basis; additional help on hourly basis of 34 to 40 cents per hr. Average weekly earnings of warehouse- men for Feb., June and Oct., 1937, were \$25.44, \$26.52 and \$26.37, respectively.	
17	P.C.V. Operator	54-hr. week.	\$21 per wk.; overtime at 40 cents per hr. (Brief).	A mover.
18	P.C.V. Operator	48-hr. week.	Hourly rate, from 40 to 50 cents. Average weekly earnings, \$21.25. (Brief).	A mover.
19	Motor Terminal	54 to 60 hrs. per week.	\$17 to \$20 per wk. (Brief).	
33	Private Commercial Vehicle Operator	Basic 9-hr. day.	\$21 to \$29 per wk. Average weekly earn- ings, \$26.25. (Brief).	
34	Private Commercial Vehicle Operator		\$24 to \$28.85 per wk. (Brief).	An oil company

**Table A6.4—Typical Hours and Wages of Shop Staff Employed in Connection With
Motor Transport Operations in Ontario**

Note: Benefits and deductions noted in Table A6.1 are here applicable.
E1887 signifies page 1887 of the evidence.

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
6	P.C.V. Operator	Work night or day; average 60 hrs. per week.	\$18 to \$22 per wk.; average weekly earnings, \$19.66. (E1887).	
8	P.C.V. Operator		45 cents per hr. (E4530).	
9	P.C.V. Operator	10-hr. day; 60-hr. week.	\$28 per week. (Brief).	
10	P.C.V. Operator	60-hr. week.	Mechanic, \$27 per wk.; assistant \$18 per wk. (E4703).	
12	P.C.V. Operator	8-hr. day.	\$18 per wk. Gasoline allowance for use of mechanic's own car in standby service. (E2278).	
13	P.C.V. Operator	10-hr. day.	32% of the shop men are on weekly basis of \$20 to \$25 per wk.; remainder \$2 to \$5 per day. Average weekly earnings for full time, with no overtime, from \$24.40 to \$24.90 per wk. (Brief).	
14	P.C.V. Operator	Basic 10-hr. day and 60-hr. week. Mechanics working on a 53-hr. wk.	\$26 to \$32 per 60-hr. wk. for mechanics and superintendent. \$17 to \$25 for assistant mechanics. Average weekly earnings, \$28.12 to \$29.22 for mechanics. (Brief).	
15	P.C.V. Operator		\$28 to \$31 per wk. for mechanics; \$14 to \$25 for other garage help. Average weekly earnings \$29 and \$20.82, respectively. (Brief).	

Table A6.4—Continued

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
16	P.C.V. Operator	Basic 60-hr. week, but up to 69½ hrs. actually worked. (Brief).	Average weekly earnings of regular staff, from \$27.18 to \$27.65. Additional help, 34 to 60 cents per hr.	
17	Mover	54-hr. week. (Brief).	\$25 per wk. Overtime, 50 cents per hr.	
18	Mover	45-hr. week. (Brief).	Mechanic, 73 cents per hr. Helper 25 cents per hr.	
19	Motor Terminal	55-hr. week. (Brief).	\$18 per week.	
20	City Bus System	Mechanics, 48-hr. week. (Brief). Apprentice, 48-hr. week. Washers, 54-hr. week.	40 to 55 cents per hr. Time and a half for overtime. Average weekly earnings \$24.64. 25 cents per hr. Time and a half for overtime. Average weekly earnings \$11.10. 40 cents per hr. Time and a half for overtime. Average weekly earnings \$23.22.	
21, 22	City and Inter-urban Bus System	Mechanics, 44-hr. week. (Brief). Juniors, 44-hr. week. Cleaners, 44-hr. week; no overtime.	60 to 70 cents per hr.; average, per wk. \$27.58. 25 to 50 cents per hr.; average, per wk. \$14.08. 55 cents per hr.; \$24.20 per wk. Where overtime is allowed, it is at the rate of time and a half.	
23	Interurban Bus System	54-hr. week. (Brief).	54 cents per hr.; \$29.16 per wk.	
25	Interurban Bus System	8¼-hr. day. (Brief).	\$27.55 per wk., average.	
28	Seven Bus Operators Serving Large Urban Centres	Approximately 48-hr. week.	Mechanics and garage employees, average weekly earnings, \$25.05.	

Table A6.4—Continued

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
28a	Eight Bus Operators Serving Small Urban Centres	Approximately 48-hr. week.	Mechanics and garage employees, average weekly earnings, \$23.68.	
31	Private Commercial Vehicle Operator		\$24.04 per wk., average. (Brief).	
32	Newspaper Pub- lisher	48-hr. week. (Brief).	Mechanics, \$25 to \$32 per wk.; \$29.18 per wk., average. Helpers, \$15 to \$20 per wk.; \$18 per week average. Bonuses amount to 55 cents per wk. for mechanics and 34 cents per wk. for helpers. For benefits, see Table A6.6.	
33	Private Commercial Vehicle Operator	Max. hrs. per wk. noted, 62. (Brief).	Mechanics, 40 to 60 cents per hr., \$27 per wk., average.	
34	Private Commercial Vehicle Operator		Mechanics, \$23.28 to \$26.40 per week. (Brief).	
38	Dairy in Toronto	Average week, 48 hrs. (Brief).	Mechanics, \$24 to \$28.35 per wk. Service Men, \$24 to \$28.80 per wk.	
39	Retail Store in Toronto	Mechanics, 44-hr. wk., average. (Brief).	\$28 to \$29 per wk.; average, \$29.21.	
40	Retail Store in Toronto	Washers and greasers, 50½ hrs. per wk., average. Motor repair mechanics, 48-hr. wk. (Brief).	\$20 to \$26 per wk.; average \$22.03. For benefits, see Table A6.6. \$19 to \$32 per wk.; average, \$29.76.	
		Body repair mechanics, 48-hr. wk.	\$20 to \$40 per wk.; average, \$30.13.	
		Tire repairers, 52-hr. wk.	\$20 to \$22 per wk.; average, \$19.82.	
		Washers, 48-hr. wk.	\$18 to \$20 per wk.; average, \$20.29.	

Table A6.5—Typical Hours and Wages of Clerical Staff Employed in Connection With Motor Transport Operations in Ontario

Note: Benefits and deductions are generally applicable to all operations.
E2823 signifies page 2823 of the evidence.

Identification Number of Employer	Nature of Business	Hours Worked	Basis and Rates of Pay	Remarks
(1)	(2)	(3)	(4)	(5)
2	P.C.V. Operator		Office men in Hamilton and Owen Sound, \$15 per week.	
4	P.C.V. Operator		Office man, Toronto, \$22 per week.	
8	P.C.V. Operator		Office men, \$18 to \$25 per week.	
9	P.C.V. Operator	Average week, 60 hours.	Office men, \$25 to \$28 per week. (Brief).	
10	P.C.V. Operator		Office men, \$15 to \$21 per week. (E4703).	
12	P.C.V. Operator	Office night man, 11 hrs. in 12-hr. spread.	\$19 per week.	
		Women, 8-hr. day. (E2278).	\$20 per week.	
13	P.C.V. Operator	Biller and platform man, week of 5 days, 7 hours.	\$21 per week. (E3930).	
14	P.C.V. Operator	Actual working week, 43 hours. (Brief).	Male clerks, \$10 to \$30 per wk.; average, \$20.89 to \$22.70 per wk. Female clerks, \$10 to \$25 per wk.; average, \$14.08 to \$14.90 per wk.	
15	P.C.V. Operator		Toronto, office men, \$15 to \$32.50 per wk.; average, \$22.05. Other cities, office men \$12 to \$24.50; average, \$17.59 per wk. (Brief).	
		40-hr. week.	\$20 per wk., average, in Toronto. (Brief).	
18	Mover		\$18 per wk.	
19	Motor Terminal	Despatcher, 55-hr. wk. Billers, 38 to 50 hrs. per wk.	\$15 to \$18 per wk. (Brief).	
24	Interurban Bus System	Station agents, 48-hr. wk. Office man.	\$24.87 per wk., average. \$34.40 per wk. (Brief).	
32	Newspaper Publisher	48-hr. week.	\$22 to \$26 per wk.; bonuses average 46 cents per wk. additional. For other benefits, see Table A6.6. (Brief).	

**Table A6.6—Typical Hours and Wages of Drivers of Highway Trucks Operating Privately and Not for Hire in Ontario
(Private Commercial Vehicles)**

Note: Benefits and deductions are generally applicable to all operations.
E5716 signifies page 5716 of the evidence.

Identifi- cation Number of Employer (1)	Nature of Business (2)	Identifi- cation Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
31	Packing House, Head- quarters in Toronto		Not over 9 to 10 hrs. per day ex- cept in case of storm or accident. Drivers work 4 days on highway and 1½ days per wk. on city delivery. Average duty per wk., 48 hrs. Regular drivers guaranteed 40 hrs. per wk.	For those drivers on weekly basis, \$32 to \$35 per wk. Daily basis, \$5 to \$5.40 per day. Aver- age weekly earnings, \$29.20.	Non-contributory pen s i o n s. Group life insurance. Employ- ees' benefit association pays benefits for sickness, accident and death. Partial wage pay- ment during illness. One to three weeks' vacation with pay.	Brief and E5716.
32	Newspaper Publisher in Toronto		Normal wk., 48 hrs. One driver makes 12-hr. round trip twice weekly; remainder of week, 8-hr. days. Two men make one trip weekly involving 12-hr. duty each way (16 hrs. in bad weather), with 10 to 12-hr. rest at far terminal; remainder of week 8-hr. days.	\$23 to \$32 per wk.; av- erage, \$26.36, not in- cluding bonuses.	One to two weeks' vacation with pay, Bonus of one weeks' pay at Christmas. Awards to drivers for freedom from ac- cidents, averaging \$1.68 per wk. Road expenses paid by employer. Employer pays fines for speeding except for \$1.	Brief and E5282.
33	Building and Contractors' Supplies		For three random-selected months the maximum weekly hrs. were 54½, 72½ (made up of 12, 12, 9, 13, 12½ and 14 hrs.) and 69½ hrs. The maximum daily hours were 13, 14 and 18½ hrs. For one of the months 17 out of 29 drivers worked over 60 hrs. per wk.	40 cents per hr. Aver- age weekly wages for three random-selected months were \$17.62, \$20.55 and \$19.71; the maximum wages were, for the same months, \$21.80, \$29 and \$27.40.	Brief and E5928. Head- quarters in Toronto.	
34	Oil Company		Average daily duty for drivers of tractor tanks, 9.93 hrs., including 40 min. for lunch, unloading, etc.; may be 12 or 13 hrs. per day due to storms or accidents and for two or three days a week in tourist season. Average time for all drivers and mechanics, 51 hrs. per wk.	Monthly basis generally, with no overtime. Dri- vers of tractor tanks, \$28.84 to \$32.31 per wk.; average, \$29.71. Drivers of tank trucks, \$18.50 to \$30.60 per wk.;	One to two weeks' vacation with pay. Non-contributory insurance for employees. Em- ployees' benefit plan to which employer contributes 50%, providing employees 60% of their wages during illness.	Brief and E5845. Do. Do.

Identification Number of Employer (1)	Nature of Business (2)	Identification Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
35	Oil Company		Average weekly duty on rural highways 50 hrs. per wk. In many instances only a 5-day wk.	Average earnings, \$25 per wk.	Vacation with pay for all drivers.	Brief
36	Canning Company	a	Hours of certain drivers for wk. ending June 26, 1937, were 67¼, 72½, 89½, 76½ and 98½ hrs., with an average for all drivers in the district of 73½ hrs., with max. days of 18½ and 19¾ hrs. and an average day of 12 hrs.	8 drivers at 35 cents per hr. and 2 at 37½ cents. Average pay, \$26.20 per wk.	Meals (after the first meal) and lodging on road paid for by employer. After one year of service, employee given a life insurance policy at employer's expense.	Brief and E5644. Since Jan. 1 1938, truck drivers have been paid 5c per hr. more than indicated at left.
		b	Hours of certain drivers for wk. ending Oct. 2, 1937, were 97½, 96¼, 99½, 76, 66, 95½, 88½ and 72½ hrs. for a 7-day week and 66 to 95½ hrs. for a 6-day week. Max. day of 19 hrs. and an average day of 13 hrs.	8 drivers at 35 cents per hr., one at 37½ and one at 42½ cents. Average pay, \$26.13 per wk.		Do.
			Part-time drivers worked for wk. ending June 26, 1937, from 59 to 81 hrs., with from 18½ to 54½ hrs., or 1 to 13 hrs. daily on truck.	20 to 30 cents per hr., with weekly pay \$12.65 for 63¼ hrs. to \$17.40 for 81 hrs.		Do.
			For week ending July 3, 1937, from 56¾ to 78½ hrs., with from ½ to 13 hrs. daily on truck.	20 to 30 cents per hr., with weekly pay \$14.18 to \$20.85.		
			For week ending Oct. 2, 1937, one part-time driver spent 76½ hrs. on truck and 39 hrs. on other work, making 115½ hrs. in all, made up of 15, 20, 16½, 18, 17½, 17¼ and 13¼ hrs.	30 cents per hr., giving \$34.65 per week.		
			Another spent 89 hrs. on truck and 6 hrs. on other work, making 95 hrs. for week.	30 cents per hr., giving \$28.50 per week.		
			Another spent 95 hrs. on truck and 7¾ hrs. on other work.	25 cents per hr., giving \$25.68 per week.		

Table A6.6—Continued

Identifi- cation Number of Employer (1)	Nature of Business (2)	Identifi- cation Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
37	Wholesale Grocers, Headquar- ters in Toronto	a	Maximum day, 10½ hrs.; weekly average, 60 hrs. In one case a driver was required to make a 200-mile run after his regular day's work. b Maximum day, 12 hrs., (6 hrs. on highway). c Maximum for week, 72 hrs.	\$65 to \$90 per month, except for one man who receives \$100. No deductions for ill- ness.	One week's vacation with pay. In some cases road expenses paid.	Brief and E5171.
38	Dairy Company in Toronto	a	Average week, 48 hrs.	Wages, plus commission on sales and collections, average about \$30.50 per wk. (Max. \$33). b Average week, 60 hrs.	Wages, plus commis- sions, average \$33.20 to \$39.40 per wk. Average, \$23.05 per wk. Average, \$25.31 per wk. Average, \$26.52 per wk. Average, \$26.60 per wk. Average, \$25.00 per wk. Average, \$26.35 per wk.	Brief.
39	Retail Store in Toronto	a b c d e f	48 hrs. per wk., city driving. 46 hrs. per wk., city driving. 48 hrs. per wk., city driving. 50½ hrs. per wk., city driving. 40 hrs. per wk., city driving. 47 1/3 to 55 2/3 hrs. per wk., city driving.	Uniforms provided free. All public holidays and 28 half- days with pay. One to two weeks' vacation with pay.	Non-contributory retiring al- lowance to those reaching age 65 after 25 yrs. service. 10% of life insurance prem- ium paid by employer.	Brief.
	General		Maximum duty period for any driver during Christmas week, 60 hrs.	Suburban drivers allow- ed 40 cents per day ex- tra. One interurban driver received \$27.71 per wk. during 1937.	Part-time pay during illness. Dental clinic and emergency hospital service free. Cost of hospitalization granted. 10% discount on purchases in store (provisions 5%) and other special discounts. Cafeteria and recreational facilities	Brief.

Table A6.6—Continued

Identifi- cation Number of Employer (1)	Nature of Business (2)	Identifi- cation Letter of Operation (3)	Hours Worked (4)	Basis and Rates of Pay (5)	Benefits and Deductions (6)	Remarks (7)
40	Retail Store in Toronto		Average time for drivers per day over one year, 8 hrs., 52 min. For 2 or 3 days in Christmas season, up to 13½ hrs. per day, including loading time.	Weekly wage, \$18 to \$25 before conduct bonus. Average for year, in- cluding conduct bonus, \$23.60 per wk. Includ- ing the dollar value of all benefits, the mini- mum, maximum and average weekly earn- ings for 1937 were: City drivers, \$22.28, \$28.78 and \$25.80. Suburban drivers, \$27.68, \$31.68 and \$28.20.	Road expenses of suburban drivers paid. Free uniforms provided. All public holidays and 9 half-days with pay. Non-contributory retiring al- lowances to drivers on merits of each case. After one year's employment \$1,000 life insurance given free. Generally, employees receive full pay when ill. Free medical service and hospitalization on merit. Drivers eligible to join em- ployees saving and profit- sharing fund. Loans made in cases of emer- gency. Cafeteria and recreational facilities. 10% discount on purchases in store. The aggregate value of the benefits to drivers is estimat- ed at \$4.28 per wk.	Brief.

Table A6.7—Typical Hours and Wages of Drivers of Buses Operating For Hire in Ontario
(Public Vehicles)

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
20	Bus Dept. of a Street Railway	Average week, 47½ hrs.	54 cents per hr. Time and one-half paid for over 49¼ hrs. per week. Average weekly earnings, \$25.16.	
21	Bus Services of a City	Basic week of 44 hrs. for regular drivers and 48 hrs. for extra drivers.	60 cents per hr. for first 3 months; 62½ cents per hr. for next 9 months; 65 cents per hr. after one year. Time and one-half after 8½ hrs. with leeway of one-half scheduled trip. Average weekly earnings, \$30.58.	
22	Interurban Coach Service	Basic day, 8 hrs.; 6-day week.	60 cents per hr. Average weekly earnings \$30.89. Average annual earnings of regular drivers on base service, about \$1,700 per year.	
23	Interurban Coach Service	Basic week, 48 hours.	55 cents per hour. Average weekly earnings, \$27.50.	
24	Interurban Coach Service	Daily maximum, 10 hours. After a 150-mile run a driver not permitted to drive until he has had at least an 8-hr. rest.	A rate per mile depending on length of service, with a bonus for safe driving. A rate of 50 cents per hr. is paid on special occasions when the mileage is low for the hours worked. Average per week, \$49.46.	
25	Interurban Coach Service	Average day, 7.05 hrs.	Average per week, \$27.55.	
26	Interurban Coach Service	Average day, about 7.5 hours. On charter work, 10 to 12 hrs. or more, per day.	Trip basis; average per wk., \$20. On charter work, \$4 for 10 to 12 hrs. After 12 hrs., 33 cents per hr.	
27	Ten Small Urban Bus Lines	30 to 60 hrs. per wk., generally 50 to 54 hrs.	\$18 to \$28 per wk.; generally \$20 to \$25.	

Table A6.7—Continued

Identification Number of Employer (1)	Nature of Business (2)	Hours Worked (3)	Basis and Rates of Pay (4)	Remarks (5)
28	Seven Operators Serving Large Urban Centres	Average day, 8 hrs. 25 min.; Aver- age week, 48 hrs. 43 min.	40 to 65 cents per hr.; average earnings per wk., \$28.95.	Brief of Ontario As- sociation of Motor Coach Operators.
	All Large Operator Members of Asso- ciation		\$22 to \$32.45 per wk.; average \$29.39.	
	Eight Operators Serving Small Urban Centres	8 hrs. per day; 48 hrs. per wk.	\$16 per wk. common; average \$18.65 per wk.	
29	Interurban Bus Service	9-hr. basic day and 54-hr. wk.	52 cents per hr. for first 10 hrs. Time and a half after 10 hrs. Average weekly earnings of regular operators for Sept., 1937, \$29.80.	

APPENDIX A-VII

LICENCE FEES FOR COMMERCIAL MOTOR VEHICLES, 1938

A.71—General. Tables A7.1 to A7.5, inclusive, set out the licence fees for the year 1938 applicable to motor trucks or tractors of Classes "A", "B", "C", "D", "E", "F" and "H"; to trailers and semi-trailers of the same classes; and to motor buses whether operating for hire (public vehicles) or not for hire. Both the ordinary commercial licence fee and the additional fee imposed on vehicles operating for hire are indicated, along with the total fee collectible from public commercial vehicles and from public vehicles.

Table A7.1—1938 Licence Fees for Motor Trucks or Tractors Operated as Class "A", "C" or "D" Vehicles

Class A = Common carriers on the King's Highway. Class C = Carrier of one person's goods for hire between specified points.

Class D = Contract carriers.

Note: See Regulations Respecting the Licensing of Public Commercial Vehicles, February, 1936, for precise definitions of classes.

	Gross Weight (weight of vehicle plus registered carrying capacity)	Commercial Motor Vehicle (Freight)			Total for P.C.V.'s		
		If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline	Public Commercial Vehicle (Freight)	If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline	
Of less than 2 tons		\$ 7.50	\$12.00	\$10.00	\$17.50	\$22.00	
Of 2 tons and up to 3 tons		18.00	24.50	15.00	33.00	39.50	
More than 3 tons and up to 4 tons		36.00	45.00	20.00	56.00	65.00	
" 4 " " " 5 "		48.50	60.00	27.50	76.00	87.50	
" 5 " " " 6 "		63.00	76.50	36.00	99.00	112.50	
" 6 " " " 7 "		73.50	89.00	42.00	115.50	131.00	
" 7 " " " 8 "		84.00	102.00	48.00	132.00	150.00	
" 8 " " " 9 "		108.00	128.00	58.50	166.50	186.50	
" 9 " " " 10 "		127.50	150.00	65.00	192.50	215.00	
" 10 " " " 11 "		148.50	173.00	82.50	231.00	255.50	
" 11 " " " 12 "		171.00	198.00	90.00	261.00	288.00	
" 12 " " " 13 "		195.00	224.00	97.50	292.50	321.50	
" 13 " " " 14 "		220.50	252.00	105.00	325.50	357.00	
" 14 " " " 15 "		247.50	281.00	112.50	360.00	393.50	

Table A7.2—1938 Licence Fees for Motor Trucks or Tractors Operated as Class "B" or "H" Vehicles

Class B = Common carriers on the King's and other highways. Class H = Carriers of uncrated used household goods, furniture and fixtures.
 Note: See Regulations Respecting the Licensing of Public Commercial Vehicles, February, 1936, for precise definitions of classes.

	Gross Weight (weight of vehicle plus registered carrying capacity)	Commercial Motor Vehicle (Freight)		Total for P.C.V.'s		
		If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline tires	Public Commercial Vehicle (Freight)	If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline
Of less than 2 tons		\$ 7.50	\$12.00	\$10.00	\$17.50	\$22.00
Of 2 tons and up to 3 tons		18.00	24.50	10.00	28.00	34.50
More than 3 tons and up to 4 tons		36.00	45.00	10.00	46.00	55.00
" 4 " " " 5 "		48.50	60.00	14.00	62.50	74.00
" 5 " " " 6 "		63.00	76.50	18.00	81.00	94.50
" 6 " " " 7 "		73.50	89.00	21.00	94.50	110.00
" 7 " " " 8 "		84.00	102.00	24.00	108.00	126.00
" 8 " " " 9 "		108.00	128.00	29.00	137.00	157.00
" 9 " " " 10 "		127.50	150.00	32.50	160.00	182.50
" 10 " " " 11 "		148.50	173.00	41.00	189.50	214.00
" 11 " " " 12 "		171.00	198.00	45.00	216.00	243.00
" 12 " " " 13 "		195.00	224.00	49.00	244.00	273.00
" 13 " " " 14 "		220.50	252.00	52.50	273.00	304.50
" 14 " " " 15 "		247.50	281.00	56.00	303.50	337.00

Table A7.3—1938 Licence Fees for Motor Trucks or Tractors Operated as Class "E" or "F" Vehicles

Class E = Milk and cream carriers. Class F = Carriers of livestock, road construction materials, bricks, cement blocks, coal or rough lumber.

Note: See Regulations Respecting the Licensing of Public Commercial Vehicles, February, 1936, for precise definitions of classes.

Gross Weight (weight of vehicle plus registered carrying capacity)	Commercial Motor Vehicle (Freight)		Total for P.C.V.'s		
	If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline	Public Commercial Vehicle (Freight)	If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline
Of less than 2 tons	\$ 7.50	\$12.00	\$1.00	\$ 8.50	\$13.00
Of 2 tons and up to 3 tons	18.00	24.50	1.00	19.00	25.50
More than 3 tons and up to 4 tons	36.00	45.00	1.00	37.00	46.00
" 4 " " " 5 "	48.50	60.00	1.00	49.50	61.00
" 5 " " " 6 "	63.00	76.50	1.00	64.00	77.50
" 6 " " " 7 "	73.50	89.00	1.00	74.50	90.00
" 7 " " " 8 "	84.00	102.00	1.00	85.00	103.00
" 8 " " " 9 "	108.00	128.00	1.00	109.00	129.00
" 9 " " " 10 "	127.50	150.00	1.00	128.50	151.00
" 10 " " " 11 "	148.50	173.00	1.00	149.50	174.00
" 11 " " " 12 "	171.00	198.00	1.00	172.00	199.00
" 12 " " " 13 "	195.00	224.00	1.00	196.00	225.00
" 13 " " " 14 "	220.50	252.00	1.00	221.50	253.00
" 14 " " " 15 "	247.50	281.00	1.00	248.50	282.00

Table A7.4—1938 Licence Fees for Trailers and Semi-Trailers

Class A = Common carriers on the King's Highway. Class B = Common carriers on the King's and other highways.
 Class C = Carrier of one person's goods for hire between specified points. Class D = Contract carriers.

Class E = Milk and cream carriers. Class F = Carriers of livestock, road construction materials, bricks, cement blocks, coal or rough lumber. Class H = Carriers of uncrated used household goods, furniture and fixtures.

Note: See Regulations Respecting the Licensing of Public Commercial Vehicles, February, 1936, for precise definitions of classes.

	Gross Weight (weight of vehicle plus registered carrying capacity)	Commercial Motor Vehicle (Freight)	Public Commercial Vehicle (Freight)			Total for P.C.V.'s		
			Class "A," "C" or "D"	Class "B" or "H"	Class "E" or "F"	Class "A," "C" or "D"	Class "B" or "H"	Class "E" or "F"
Of 1 ton or less		\$ 2.00	\$ 10.00	\$ 10.00	\$ 1.00	\$ 12.00	\$ 12.00	\$ 3.00
More than 1 ton and less than 2 tons		7.50	10.00	10.00	1.00	17.50	17.50	8.50
Two tons		7.50	15.00	10.00	1.00	22.50	17.50	8.50
More than 2 tons and up to 3 tons		15.50	15.00	10.00	1.00	30.50	25.50	16.50
" " 3 " " " 4 "		24.00	20.00	10.00	1.00	44.00	34.00	25.00
" " 4 " " " 5 "		37.50	27.50	14.00	1.00	65.00	51.50	38.50
" " 5 " " " 6 "		49.50	36.00	18.00	1.00	85.50	67.50	50.50
" " 6 " " " 7 "		57.50	42.00	21.00	1.00	99.50	78.50	58.50
" " 7 " " " 8 "		66.00	48.00	24.00	1.00	114.00	90.00	67.00
" " 8 " " " 9 "		81.00	58.50	29.00	1.00	139.50	110.00	82.00
" " 9 " " " 10 "		90.00	65.00	32.50	1.00	155.00	122.50	91.00
" " 10 " " " 11 "		115.50	82.50	41.00	1.00	198.00	156.50	116.50
" " 11 " " " 12 "		126.00	90.00	45.00	1.00	216.00	171.00	127.00
" " 12 " " " 13 "		136.50	97.50	49.00	1.00	234.00	185.50	137.50
" " 13 " " " 14 "		147.00	105.00	52.50	1.00	252.00	199.50	148.00
" " 14 " " " 15 "		157.50	112.50	56.00	1.00	270.00	213.50	158.50

Table A.7.5—1938 Licence Fees and Seat Taxes for Motor Buses Having a Seating Capacity for Ten or More Passengers

Note: Public vehicle is a motor vehicle transporting passengers, or passengers and express freight, for hire.
See The Highway Traffic Act, R.S.O. 1937, c. 288, s. 1(m).

Gross Weight (weight of vehicle plus carrying capacity)	Licence Fees for Motor Buses, Public or Private			Seat Tax on Public Vehicles	Total for Public Vehicles	
	If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline	If equipped wholly or in part with solid tires or operated by other than gasoline		If equipped wholly with pneumatic tires	If equipped wholly or in part with solid tires or operated by other than gasoline
(1)	(2)	(3)	(3)	(4)	(5)	(6)
Of less than 2 tons	\$ 7.50	\$12.00	One-twentieth of one cent per seat mile on provincial highways and one-thirtieth of one cent per seat mile on county or township roads.	Column (2) plus Column (4)	Column (3) plus Column (4)	
Of 2 tons and up to 3 tons	18.00	24.50				
More than 3 tons and up to 4 tons	27.00	36.00				
" " 4 " " " 5 "	41.00	52.50				
" " 5 " " " 6 "	54.00	67.50				
" " 6 " " " 7 "	63.00	78.50				
" " 7 " " " 8 "	72.00	90.00				
" " 8 " " " 9 "	87.50	108.00				
" " 9 " " " 10 "	97.50	120.00				
" " 10 " " " 11 "	123.50	148.50				
" " 11 " " " 12 "	135.00	162.00				
" " 12 " " " 13 "	146.00	175.50				
" " 13 " " " 14 "	157.50	189.00				
" " 14 " " " 15 "	168.50	202.50				

APPENDIX A-IX

ESTIMATED COSTS OF OPERATION OF MOTOR TRANSPORT
BUSINESSES

SECTION 1 — MOTOR TRUCK OPERATION

A9.1—Operating Costs of P.C.V.'s as a Ratio to Fuel Tax Paid. As pointed out in Chapter IX, the only obtainable basis of comparison of the operating costs of public commercial vehicles in Ontario, due to the absence of complete operating records, was found to be the ratio of the various operating expenses to the amount of fuel tax paid.

Eliminating the cases where details were lacking or incomplete, it was found that more or less comparable statistics of itemized costs expressed as ratios of the fuel tax were available from eleven P.C.V. class "A" operators. These are set forth in Table A9.1, the operators being distinguished by code letters. The total annual business represented by the eleven operators was, in round figures, \$3,300,000, carried on at a composite operating ratio of 93.67 per cent. Individual operators in the group did from 1% to 35% of this annual business. Two of the included firms used Diesel equipment to some extent; one carries on a substantial amount of city cartage; another, a more than normal amount of rural delivery; while for still another company the cost of only a part of the delivery of its freight is included. To some degree the effects of these exceptional conditions will offset one another and are diluted in the average.

As is evident from an examination of column 21 of Table A9.1, the ratio of total cost of operation to fuel tax ranges from 13.20 to 25.23, with a weighted average for the eleven operators of 19.94. The weighted cost per gallon of fuel for the eleven operators, as indicated in column 22, is \$1.196. After making an empirical adjustment for the relatively small number of Diesel engines in the total equipment, the cost would still average very closely \$1.20 for all-gasoline operation.

Omitting the operator who makes extensive use of Diesel equipment, the weighted average cost of operation of the remaining ten P.C.V. operators is \$1.25. For these ten trucking organizations the combined total annual business was \$2,846,517 with a combined cost of operation before interest on investment or profit to owners of \$2,646,132, or 92.94% of the receipts.

It is obvious that the cost of carrying on a class "A" public commercial vehicle business per gallon of fuel used will vary considerably with the class of road travelled, character of freight hauled, type of equipment, average length of haul, load factor, use factor, and whether the load consists of miscellaneous package freight or tonnage shipped to one consignee. It is apparent, however, from the above that under the conditions that existed with respect to wages and hours, for the year 1936 at least, and with reasonable efficiency in operation and an adequate amount of traffic, a fair cost of operation per gallon of fuel consumed would be \$1.25.

It is useful to note how this weighted average cost of operation of \$1.25 per gallon of fuel is made up and at the same time to show what the corresponding allocation would be for the six operators whose costs varied less than fifteen per cent. from the average, as the results are dependent upon accurate statistics of gasoline consumption. Table A9.2 exhibits this breakdown and, in addition,

Table A9.1—Ratio of Various Items of Operating Expense to Fuel Tax Paid for Eleven Typical Public Commercial Vehicle Operators in Ontario
and Total Operating Expense per Imperial Gallon of Fuel Consumed

Company	Depre- ciation	Repairs	Tires	Fuel and Oil	Fuel Tax	Licences	Insur- ance	Hired Trucks and Cartage	Miscel. Road Expenses Incl. Bridge Tolls	Workmen's Compensation	Wages of Drivers, Loaders and Repairmen	Salaries, Office Staff and Solicitors	Salaries, Working Executives	Telephone and Telegraph	Travel Expense and Advertising	Miscel. Gar- age and Office Expense	Miscel. Admin. Exp. Rent, Taxes	Claims, Refunds, Fines, Accidents	Interest on Borrowed Money	Total	Cost per Gallon of Fuel, in Cents
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A	1.63	1.38	(a)	1.96	1.00	0.59	0.54	...	0.01	0.17	4.15	0.72	...	0.28	0.17	0.27	0.22	0.08	0.03	13.20	79.20
B	0.97	3.07	(a)	3.22	1.00	0.79	0.87	...	...	...	5.43	0.77	0.30	...	...	3.09	0.06	...	0.20	19.77	118.62
C	1.07	1.83	0.66	2.71	1.00	0.71	0.78	0.85	0.04	0.29	5.99	1.76	0.19	0.38	0.21	0.50	0.30	0.50	0.05	19.82	118.92
D	1.14	2.03	0.55	3.21	1.00	0.67	0.60	1.29	...	0.10	3.42	0.83	2.05	0.51	0.63	0.33	1.01	0.49	0.19	20.05	120.30
E	1.41	1.55	0.54	2.60	1.00	0.75	0.72	0.64	0.39	0.20	5.83	1.38	1.39	0.24	0.24	0.35	0.65	0.24	0.05	20.17	121.02
F	2.04	2.28	(a)	2.78	1.00	1.14	0.65	0.59	...	0.27	6.62	0.52	1.49	...	0.41	0.76	0.37	0.05	0.16	21.13	126.78
G	2.34	4.48	(a)	3.79	1.00	1.10	0.30	...	0.60	0.51	5.56	0.71	...	0.61	0.85	0.35	0.82	0.19	...	22.71	136.26
H	1.21	1.65	0.69	2.93	1.00	1.21	0.70	1.33	0.15	0.36	7.70	(b) 1.90	(b) 0.95	0.41	0.22	1.48	0.32	0.25	0.14	24.60	147.60
I	1.39	1.46	0.75	2.37	1.00	1.20	0.64	...	0.94	0.34	8.52	2.71	1.21	...	...	1.48	0.99	...	...	25.00	150.00
J	0.94	1.41	0.49	3.37	1.00	1.01	0.99	0.86	...	0.31	8.52	0.92	1.31	0.40	0.11	0.91	2.16	0.28	0.24	25.23	151.38
K	2.07	2.21	1.40	2.06	1.00	0.91	0.69	...	1.41	0.25	6.26	1.23	0.61	0.25	0.27	0.44	0.51	0.35	0.25	22.17	133.02
Weighted average for 11 operators	1.33	(2.40)		2.46	1.00	0.82	0.68	0.33	0.37	0.25	5.99	1.47	0.68	0.30	0.26	0.52	0.44	0.36	0.08	19.94	119.64
Weighted average (c) for 10 operators (Ex- cluding Diesel opera- tions)	1.30	(2.37)		2.69	1.00	0.86	0.72	0.64	0.22	0.27	6.38	1.57	0.74	0.32	0.27	0.56	0.48	0.38	0.07	20.84	125.04
Operating expense in cents per gallon of fuel, average of 10 operators	7.80	14.22		16.14	6.00	5.16	4.32	3.84	1.82	1.62	38.28	9.42	4.44	1.92	1.62	3.36	2.88	2.28	0.42	...	125.05

Notes:

(a) Included with repairs or garage expenses.

(b) Wages of drivers and office staff not separated. Divided according to the average ratio shown by other companies.

(c) The weighted average was obtained by dividing the aggregate expenditure by all the companies included in respect of the item considered by the total fuel tax paid by all the companies included.

Total annual business of 10 operators—\$2,850,000

Total equipment of 10 operators—209 Tractors
313 Trucks
248 Semi-trailers
52 Trailers
19 Dollies

column 4 shows the allocation of costs of the particular operator, F, whose costs most nearly approach the average.

In any comparison of the segregated costs indicated in Table A9.2, it must be remembered that no two operators allocated their costs in identically the same way. For example, while operator F shows no road expenses as such, it cannot be assumed that they did not exist. Rather, it is likely that these are included under another heading as, for example, travelling or miscellaneous expenses. The same may be said of telephone and telegraph expenditures.

Set up in much briefer form, as in Table A9.3, the segregation of costs reveals some remarkably constant relationships which should be of considerable assistance in determining the general effect of an increase in cost of one particular class of expenditure, as, for example, wages and salaries.

A9.2—Cost-Tonnage-Mileage Relationships for Six Representative Operators. As has already been pointed out, there is a complete absence of any statistical information concerning the ton-miles hauled by operators, and lacking such there is no possible way in which to make any accurate estimate of the business done on the basis of this unit.

Table A9.2—Analysis of Operating Costs of Typical Public Commercial Vehicle Class “A” Operators for Gasoline-Propelled Equipment, in Cents Per Gallon of Gasoline Consumed

Nature of Expenditure (1)	Average of 10 Operators (2)	Average of 6 Operators (a) (3)	Operator F (b) (4)
Depreciation of equipment	7.80	7.65	12.25
Repairs (Including tires and replacements)	14.20	14.65	13.65
Gasoline and oil (less tax)	16.10	16.50	16.65
Gasoline tax	6.00	6.00	6.00
Commercial vehicle licences and P.C.V. licences ..	5.15	4.70	6.85
Insurance	4.35	4.45	3.90
Hired trucks and cartage	3.85	4.50	3.55
Bridge and ferry tolls	1.00	0.25	...
Miscellaneous road expenses	0.35	0.40	...
Workmen's compensation	1.60	1.55	1.60
Wages of drivers, loaders and repairmen	38.30	35.60	39.75
Wages of office staff and solicitors	9.40)	8.65)	3.10)
and salaries of working executives	4.45)	3.95)	8.95)
Telephone and telegraph	1.90)	1.80)	...
Travelling and advertising	1.65)	1.50)	2.45)
Miscellaneous garage and office expenses	3.35)	3.55)	4.60)
Miscellaneous admin., rent and taxes	2.90)	2.40)	2.20)
Claims, refunds, fines, accidents	2.30)	2.20)	0.30)
Interest on current advances	0.40)	0.45)	1.00)
	125.05	120.75	126.80

(a) Operators B to G, inclusive, in Table A9.1.

(b) Operator whose costs most nearly approach the average.

Table A9.3—Main Elements of Operating Costs of Typical Public Commercial Vehicle Class “A” Operators for Gasoline-Propelled Equipment, in Cents per Gallon of Gasoline Consumed

Nature of Expenditure	Average of 10 Operators	Average of 6 Operators	Operator F
Wages, salaries and workmen's compensation ..	53.75	49.75	53.40
Operation of vehicles	53.60	53.95	59.30
Other expenses of business	17.70	17.05	14.10
	125.05	120.75	126.80

Some helpful information can be secured, however, from an analysis of the statistics of six P.C.V. operators, who furnished statistics of both miles travelled and tons carried. Treating these as a composite company the relationships appearing in Table A9.4 exist.

An approximation of the average length of haul was made by an examination of the data taken from 1303 waybills of some fifteen operators during the progress of the Commission's hearings. While this number constitutes a small proportion of the total number of waybills prepared during a year by these operators, it is believed that they provide a representative cross-section of the

business. The waybills represented the movement of 1008.4 tons of freight a total distance of 141,731 miles and a total of 102,511.5 ton-miles, giving an average highway haul per ton of 101.7 miles. By reason of the relatively small number of movements analyzed, and the fewness of the operators, the average length of haul thus ascertained should be regarded as only a tentative figure.

Utilizing it, however, the cost of carrying on a Class "A" transport business is found by dividing the expense per ton of freight handled by the six typical operators, given as \$4.15 in Table A9.4, by 101.7 miles to be 4.08 cents per highway ton-mile.

It is interesting in this connection to refer to Mr. Goodale's evidence to the effect that his company insisted¹ on having 25 cents per highway mile for a ten-ton unit, as being the minimum practicable under existing conditions of

Table A9.4—Operating Statistics for the Six Public Commercial Vehicle Class "A" Operators Who Submitted Data Respecting Tonnage Carried and Miles Travelled

Item	Amounts
Total annual business of six operators	\$845,000
Total expense of P.C.V. business per gallon of fuel used	\$1.25
Expense per mile operated	17.95 cents
Expense per ton of freight handled	\$4.15
Receipts per ton of freight handled	\$4.88
Miles operated per gallon of fuel used (Including pick-up and delivery)	6.954
Tons transported per gallon of fuel used	0.300
Vehicle-miles operated per ton of freight handled	23.15

Note—Four of the operators included in the above statement are included in the group of ten operators shown in Table A9.2, and two are included in the group of six referred to in that table.

licensing and wages. This was based on loads averaging 50% of capacity, it being "a lucky transport owner that can carry or keep his tonnage over 50% of his capacity." It represents 5 cents per ton-mile.

Adopting the distance of 23.15 miles, including pick-up and delivery mileage, operated per ton of freight handled, as indicated in Table A9.4, and the average length of highway haul above estimated at 101.7 miles, the average load must be in excess of 4.39 tons. Assuming the pick-up and delivery mileage to total six miles per ton, the average highway load would be slightly less than six tons.

In a traffic check carried out at the Welcome scales, on No. 2 Highway, on November 23-29, 1937, the average load per P.C.V. truck was found to be 3.02 tons. A corresponding check taken during the same period at the Dundas Forks scales, on No. 5 Highway, indicated an average load of 2.53 tons. While due to the seasonal influence, it is possible that the loadings found by these surveys were below the average for the year, on the other hand, it is believed that the average miles travelled per ton would be somewhat above the 23.15 miles indicated for the six operators comprised in Table A9.4, but sufficiently precise information is not available. As an indication of the wide variations in data occasioned by the special characteristics of each operator's business, the miles operated per ton of freight handled by the six operators mentioned were, respectively, 23.93, 18.64, 30.37, 25.67, 53.30 and 13.04.

¹Evidence, p. 4642-3.

Approximations of the miles run by other operators were made on the basis of the number of gallons of fuel consumed and the indications were that the average mileage operated per ton of freight was about 30 miles. Should this distance be more representative than the shorter one, the average loading would consequently be about 3.6 tons.

A9.3—Reported Line-Haul Costs. Either in evidence or in the written submissions, the actual costs of specific line-haul operations were frequently mentioned. Some of these are of value and will be cited.

Mr. Gutmann, of Smith Transport, Ltd., gave explicit evidence respecting the cost of hauling nine tons of freight from Toronto to Cornwall, a distance of 275 miles, by tractor and trailer, including all overhead, but excluding pick-up and delivery costs, as 24½ cents per 100 lbs., or 1.78 cents per ton-mile. On the basis of double hook-up operation, the cost was estimated at 14 5/6 cents per 100 lb., or 1.08 cents per ton-mile. The equipment was assumed to be Diesel equipment for determining depreciation, *etc.*, but the cost of fuel was taken as that for gasoline.² One man only was assigned to the double hook-up.

Mr. Burford gave indirectly an example of the minimum cost of transport. The earnings of a double hook-up with two men, carrying 30,000 lb. on the 196.5 mile trip from Picton to Ottawa, were \$51.00, or 1.74 cents per ton-mile. It was quite apparent that to keep costs within receipts, long hours and continuous operation of the equipment was essential.

Mr. Atkinson, for The Toronto Star, Ltd., and Starways, Ltd., presented in his evidence a tabular statement³ of the mileages run, yearly costs for 1937, and gasoline consumption for 1937 for every individual piece of equipment in their large fleet of motor vehicles, and later filed with the Commission, some supplementary details of cost of single and double hook-ups.

The great bulk of the Star's fleet is engaged in city delivery of newspapers—a specialized type of operation. These are excluded for the purpose of this study. A certain number of the company's vehicles, including all of the heavier types, are (or were during the period for which the statistics are available) engaged in conveyance of newspapers to other towns, 20 to 320 miles distant, or in the conveyance of paper stock, and a small quantity of other merchandise, under the Class "D" licence of Starways, Ltd.

Costs, as given, include all normal costs of operation and interest on investment, but do not include cargo, public liability or property damage insurance. Garage costs, administration overheads, depreciation, wages, road expenses, and all direct vehicle costs are included. Wages are higher than the average, and probably over-all speed for newspaper trucks is higher than the average for trucks generally.

Average costs of operating trucks and trailers on interurban runs only are indicated in Table A9.5. The costs shown "per ton-mile, 100% load factor" are the theoretical minimum costs and are practically never obtainable. A load factor of 50% more nearly represents usual normal operation. It would be unduly high for a private vehicle.

The heavy tractor equipment is Diesel-operated. Costs of such operation are given, as well as an estimated comparable figure for gasoline operation. In the case of one group, slight adjustments have been made from averages to allow for single and double hook-up operations.

²Evidence, p. 7462-3.

³Evidence, p. 5269A.

Table A9.5—Cost of Operating Interurban Motor Trucks and Trailers Over Distances of 20 to 300 Miles, Reported by The Toronto Star, Ltd., and Starways, Ltd., Toronto^{3a}

Equipment	Licensed Gross Weight, Lb.	Average Pay Load Capacity, Lb.	Average Annual Miles	Average Gallons Fuel Used	Average Cost Per Gallon	Average Cost Per Mile, Cents	Cost per Ton-Mile, 100% Load Factor, Cents	Cost per Ton-Mile, 50% Load Factor, Cents
2-ton truck	12,000	4,010	40,384	3,952	\$1.20	11.74	5.87	11.74
2½-ton truck	16,000	8,300	24,978	3,180	1.21	15.62	3.76	7.52
5-ton truck	20,000	9,985	47,429	6,471	1.06	14.40	2.88	5.76
Light								
Tractor and semi-trailer (Gasoline)	26,000	15,520	24,290	3,487	1.49	21.46	2.77	5.54
Medium								
Tractor and semi-trailer (Diesel)	40,000	25,048	33,320	3,130	2.43	22.97	1.95	3.90
(Estimated for gasoline) .....	...	...	...	...	(1.322)	(25.07)	(2.10)	(4.20)
Heavy (a)								
Tractor and semi-trailer (Diesel)	44,000	27,000	25,000	...	...	27.0	2.00	4.00
(Estimated for gasoline) .....	...	...	...	...	...	(29.5)	(2.185)	(4.37)
Heavy tractor (Diesel)								
Dolly and 2 semi-trailers	79,000	52,000	25,000	...	...	35.0	1.35	2.70
(Estimated for gasoline) .....	...	...	...	...	...	(38.0)	(1.46)	(2.92)
(a) 2 drivers composing crew.								

^{3a}Evidence, p. 5269 B.

Mr. Sylvester, for Wm. Winters Transport, figured \$37.80 as the cost of one day's operation of a vehicle capable of carrying ten tons from St. Catharines to Toronto and return, a total distance of 140 miles.⁴ This gives a cost of 2.7 cents per ton-mile for a full load both ways. It is for a full truckload door-to-door operation.

Marks Transport reported a daily cost of \$16.74, in 1936, as an average cost of all its trucks (including pick-up and delivery trucks) for the actual days each operated.⁵

Considering all of the evidence and information made available to it, the Commission is satisfied that a cost of 2 cents per ton-mile is the reasonable minimum cost for line-haul movements, including the overhead costs properly applicable thereto. This is a cost only obtainable in exceptional circumstances involving the use of large equipment and the movement of freight in large quantities. It can be bettered only by the use of double hook-ups, or the continuous operation of men and equipment, or other practices not conducive to highway safety.

With smaller equipment, and a proportion of partial loads, costs per ton-mile will exceed 2 cents. The tentative figure given in Art. A9.2, computed from the available data as the cost of carrying on a P.C.V. business, is 4.08 cents per ton-mile. It will be indicated in Art. A9.5, that not much less than 50% of this cost is occasioned by pick-up and delivery service.

Hence it may be said that line haul, as usually performed by heavy truck or by tractor and one semi-trailer, costs not less than 1/10 cent per hundred pounds per mile.

A9.4—Costs of Vehicle Operation. Under normal conditions there appears to be comparatively little difference in the cost of operating various sizes of vehicles per gallon of fuel used. The average cost of operating a highway fleet of twelve heavy tractors and semi-trailers was 73.86 cents per gallon of gasoline used, or 12.3 cents per mile. For an equal fleet of light tractors and semi-trailers it was 81.29 cents per gallon of gasoline used, or 10.7 cents per mile. These costs included depreciation, licences and wages, but not garage accommodation, administration or overhead. A large fleet of half-ton city delivery trucks cost 83.04 cents per gallon of gasoline, or 8.37 cents per mile, exclusive of drivers' wages and overhead costs.

A9.5—Cost of Pick-Up and Delivery. *Importance.* In the conduct of any typical P.C.V. Class "A" business, a very considerable proportion of the employees are concerned with pick-up and delivery service.

On the basis of 17 transport companies conducting Class "A" operations, and employing 633 drivers, 308 of these were classed as pick-up and delivery drivers. This high proportion exists despite the fact, disclosed in evidence, that a substantial proportion of the freight handled by these operators is picked up and delivered by the highway vehicles. In the case of one operator 42% of all shipments are so handled.

The cost of conducting the necessary pick-up and delivery operations has consequently an important bearing on the success of a trucking enterprise.

Warehouse employees of the 17 companies mentioned total 175 employees engaged in receiving, sorting and loading freight. At least half of the staffs

⁴Evidence, p. 4389.

⁵Evidence, p. 2322.

of these organizations are concerned with pick-up and delivery services. The cost of these operations cannot be much less than half of the total operating costs of the companies concerned, exclusive of business office and administration costs.

Mileages and Load Factors of Highway Trucks and Pick-Up and Delivery Trucks. More than one witness before the Commission estimated that his pick-up and delivery trucks ran about fifty miles per day, or 15,000 miles per year, but in no case was such opinion based on any records of mileages.

Mr. Sylvester, for Wm. Winters Transport,⁶ estimated that their ten-ton units run approximately 50,000 miles annually and their P. and D. trucks about 15,000 miles; and that full loads from St. Catharines to Toronto comprise 80% of their business.⁷

Mr. Strathdee⁸ divided his statement of annual mileage of 319,800 miles into about 10,000 miles for each of six P. and D. trucks and about 43,000 miles for each of six highway trucks.

Mr. Carr⁹ estimated from a three months' survey, that ten highway trucks averaged 35,000 miles each and four P. and D. trucks averaged 12,500 miles each, to give his estimated annual total of 400,000 miles; that winter mileage is about two-thirds of summer mileage; that for six months of the year a stake truck with five tons capacity averages 75% of capacity load, and for six months 50% of capacity; that a tractor and semi-trailer with eight tons capacity for six months' loadings averages 80% of capacity, and for six months 60% of capacity.

Mr. Goodale,¹⁰ on the basis of two weeks' check, computed his annual mileage at 475,000 miles, and thought that this was right within 25,000 miles. He divided this mileage between eighteen highway trucks at about 22,200 miles each, and eight P. and D. trucks averaging 9,400 miles each.

On the other hand, several important organizations reported considerably lower mileages. Data received from one company operating a very large fleet of light parcel and pick-up and delivery trucks at a number of points throughout Ontario, showed an average mileage per day of just under thirty miles, or about 9,000 miles per year. These trucks, chiefly 1½- and 2-ton trucks, although some were smaller, consumed an average of 3.26 gallons of gasoline per basic day of eight hours.

Cost Per Mile and Per Day. Statistics furnished by an industrial organization in Toronto, and also by a mercantile firm, both with extensive delivery services, and both working normal eight-hour days, show average weekly mileages of approximately 150 miles, and costs of 8½ cents per mile for all costs of operating 1½- or 2-ton trucks, exclusive of drivers' wages, garage rentals and administrative overhead.

Assuming thirty miles per day at 8½ cents, the direct cost per day of a pick-up and delivery truck is \$5.55, allowing \$3.00 for the driver.

Cost of Operations of Motor Transport Terminals. Valuable information on this matter was furnished by Motor Express Terminals, Ltd., Toronto. The business of this organization consists exclusively in the soliciting and pick-up and delivery of freight for their client transport companies. Mr. Thorpe, in

⁶Evidence, p. 4381.

⁷Evidence, p. 4391.

⁸Evidence, p. 2813.

⁹Evidence, pp. 2901, 2950.

¹⁰Evidence, p. 4639, *et seq.*

his evidence, gave the cost of pick-up and delivery per 100 lb., either picked up or delivered, as approximately 10 cents.¹¹

By no means all of the freight handled by its client transport companies is handled across the Motor Express Terminals' platforms. Larger shipments are picked up and delivered by the transport operators themselves, including some which have been solicited by Motor Express Terminals. On these latter Terminals charges 3 cents per 100 lb.; on parcels picked up or delivered, the price is 10 cents per 100 lb. In addition, transport companies pay the company rentals for platform space, which averages another $1\frac{1}{4}$ cents per 100 lb. handled through the terminal. For shipments passed directly from one transport to another a fee of 5 cents per 100 lb. is charged. From the admitted financial results of these operations to the company, the prices charged virtually represent cost.¹²

Average Weight of Shipments and Packages. The Motor Express Terminals, Ltd., is essentially what its name implies. Most of its freight is express freight and its shipments would average considerably lighter than those handled by a normal transport company. A survey of one day's operations gave an average of 4.77 packages per shipment, with the number of shipments less than 100 lb. being equal to the number of shipments more than 100 lb., the average weight of the latter being 400 lb. The average weight per individual package handled was about 48 lb.

The results of this spot check, so far as weight of packages is concerned, correspond remarkably well with one referred to by Mr. Teakle, of Martin Transports, Ltd., during his evidence.¹³ In a survey of about 1,000 waybills, the average weight found per shipment was 406 lb. and it was put up in eight to ten packages. Martin Transports do a large short-haul as well as a long-haul freight business of essentially package type.

From the one-day survey mentioned, the average weight per shipment is 250 lb., taking minima at 100 lb. The average tonnage per day is very nearly 60 tons, representing an average of 480 shipments at a nominal 250 lb. each. These are gathered or delivered by a variable number of trucks, representing a pick-up or delivery of 53 shipments, or 13,333 lb. on the average per day per truck for an expenditure of 7.3 gallons of gasoline, or 1.1 gallons per ton of freight picked up or delivered.

Costs Per Pick-Up and Per 100 Pounds. From such segregation of the operating costs of Motor Express Terminals as is possible, it is estimated that vehicle operation and actual pick-up or delivery by the driver represents between 54% to 60% of the total cost of operation, less solicitation and administration. On this basis, substantiated from other sources, bare delivery or pick-up costs range from 5.25 cents to 5.80 cents per 100 lb., say 5.50 cents. On the above daily tonnage handled per truck, the cost per truck per day would be \$7.34, or almost exactly \$1.00 per gallon of gasoline consumed in the process.

If it be assumed that the driver is actually driving the vehicle only one-third of the time, and the remainder of the time is at the consignees' or shippers' premises delivering or receiving goods, the actual truck operation would have to carry a charge of about 4.00 cents per 100 lb. and actual receiving or delivering the goods one of 1.50 cents per 100 lb. This is on the basis of the driver receiving \$3.00 per day.

Statistics furnished by a private industrial company with several plants

¹¹Evidence, p. 6491.

¹²Evidence, p. 6305.

¹³Evidence, p. 3767.

throughout Ontario, and making steady deliveries of their products at 85% load factor on 1½- and 2-ton trucks, show delivery costs per 100 lb. varying from just under 7 cents to 10½ cents per 100 lb. The number of stops per day ranges from 36 in a small city to 51 in Toronto.

Another company handling a very substantial amount of heavy freight informed the Commission that heavy freight in quantity can be picked up or delivered in Toronto for a fraction less than 5 cents per 100 lb., and in Hamilton about 35% cheaper, since the size of the delivery area is smaller.

Mr. Gutmann, of Smith Transport, Ltd.,¹⁴ stated that pick-up or delivery costs in Toronto are 7 cents to 8 cents per 100 lb., including warehousing, or the sorting of the freight as received, and in Montreal 8 cents per 100 lb.

From the above data, necessarily fragmentary by reason of the dearth of cost records kept by the operating companies, and from much other information gathered in confidence, it is possible arbitrarily to segregate average pick-up or delivery costs in Toronto per 100 lb. of package freight approximately as follows:

Pick-up and delivery truck operation cost	4.00 cents
Driver's time off truck, receiving or delivering	1.50 "
Handling and sorting freight, loading and unloading pick-up and delivery trucks	2.50 "
Clerical, supervision and overhead	1.75 "
	9.75 "

The above cost is altogether irrespective of the cost of loading or unloading the highway trucks, which may or may not be done by the trucks' own drivers, but it includes the piling of the goods on the platform ready for them. It will thus be seen that except for some part of the clerical and overhead costs, assumed as 0.75 cents per 100 lb., these pick-up and delivery costs are wholly additional to the cost of direct line-haul movement from shipper's door to consignee's door in truckload, or part truckload, shipments. There would be considerable saving in rent and other expense if no terminal platforms or warehouses were required. This purely additional cost of pick-up or delivery service is, from the above figures, assumed as 9 cents for Toronto, and, on the basis of Mr. McGregor's evidence,¹⁵ as 6½ cents in Hamilton. For a town with less sorting and shorter deliveries the cost might be as low as 4 cents, but could hardly be less.

A9.6—Cost of Loading and Unloading Highway Trucks. From figures supplied the Commission, the actual labour cost of loading and unloading heavy freight into and from the highway trucks at the terminals is 2.55 cents per 100 lb., or about 1¼ cents for each operation.

Confirmation of this figure is found in Mr. Sylvester's estimate of \$37.80 as the cost of transporting 10 tons in each direction on a round trip of 140 miles, or \$18.90 for the single trip of 70 miles.¹⁶ On the basis of 2 cents per ton-mile with 100% load factor, in accordance with Table A9.5, the haulage cost is \$14.00, leaving 49 cents per ton as the cost of loading and unloading.

It would appear that around 2½ cents per 100 lb., or 50 cents per ton, is approximately the loading and unloading costs for either door to door shipments, or for terminal to terminal shipments. If after this first unloading, it must be distributed by pick-up and delivery trucks, and prior to the first loading must be gathered in by pick-up and delivery trucks, there is a cost for each of such operations of an additional 9 cents per 100 lb. in Toronto and probably as low as half of that in a small town.

¹⁴Evidence, p. 3024.

¹⁵Evidence, p. 5144A.

¹⁶Evidence, 4389.

Table A9.6—Practice of Fifteen Public Commercial Vehicle Operators With Respect to Allowances for Depreciation

Company	Tractors	Trucks	Semi-trailers	Trailers	Dollies	Cars and Service	Investment, First Cost	Depreciation Reserve Written Off Initial Cost on Last Balance Sheet	Written Off During Last Year	Year's Write-Off as a Percentage of First Cost	Total Write-Off as a Percentage of First Cost	Other Fixed Assets (Buildings, Garage Equip't, Furniture) First Cost	Depreciation to Date on Buildings, Garage Equip't and Furniture
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
61	6	8	6	1	..	2	\$ 32,692	\$ 11,595	\$ 6,902	21.11	35.16	\$ 5,629	\$ 440
75	6	9	7	5	..	..	26,528	18,510	3,498	13.19	69.77	5,400	104
72	86	106	94	26	17	4	397,216	213,289	61,763	15.55	53.70	31,076	7,483
69	3	12	3	4	..	..	25,095	16,030	4,293	17.11	63.88	..	..
68	34	37	34	12	..	4	173,831	97,816	27,900	16.05	56.27	39,066	3,245
71	27	21	32	1	..	..	175,047	120,231	26,676	15.24	68.68	48,457	13,005
77	2	10	2	..	..	..	18,800	3,760	3,760	20.00	20.00	200	0
79	8	21	8	1	..	3	46,973	32,972	3,489	7.43	70.19	2,481	1,566
84	35	75	60	2	..	..	260,488	212,152	24,952	9.58	81.44	205,110	34,943
78	2	14	2	..	..	..	32,922	22,574	1,500	4.56	68.57	2,331	1,086
81	48	39	60	31	9	..	228,686	97,745	40,839	17.86	42.74	44,732	4,081
86	1	3	1	..	..	..	5,895	1,034	1,034	17.54	17.54	42	..
64	..	10	..	..	..	..	7,345	5,664	334	4.55	77.11	2,019	1,175
88	4	14	4	..	..	..	29,600	15,028	6,296	21.27	50.77	..	..
89	2	7	2	..	..	..	18,233	15,321	1,187	6.51	84.03	0	0
264	386	315	83	28	13	13	\$1,479,351	\$883,721	\$214,423	14.49%	59.06%	\$386,543	\$67,128 (17.37%)

A9.7—Other Costs Incidental to Line Haul. It would be conservative to estimate that the clerical and overhead expenses of Motor Express Terminals, for example, would not be materially affected if the company were conducting highway, as well as pick-up and delivery, operations. On this basis 0.75 cent has been deducted from the estimated cost of 100% pick-up and delivery services and must be added to the cost of loading and unloading to cover all highway terminal charges, which would accrue irrespective of whether the load was taken on or set off at a terminal or a private shipping door. On this principle, 4 cents per 100 lb. would be added to the cost of highway line haul, 2.50 cents of which would be to cover loading and unloading and 1.50 cents to cover clerical and overhead costs.

Table A9.7—Equipment and Employees Required in Public Commercial Vehicle Operations in Ontario, 1936

Item	18 Companies	5 Large Companies, Business in Excess of \$300,000	13 Small Companies, Business \$100,000 or less
Total business	\$3,465,000	\$2,920,000	\$545,000
Total pieces of equipment	1,086	887	199
Total power units	659	509	150
Business per:			
Unit of equipment	\$3,190	\$3,290	\$2,740
Power unit	\$5,260	\$5,740	\$3,635
Tractors	267	229	38
Trucks	392	280	112
Semi-trailers	320	280	40
Trailers	79	72	7
Dollies	28	26	2
Total employees	1,278	1,078	200
Drivers and helpers	736	601	135
Warehousemen	209	179	30
Garagemen	92	79	13
Office and solicitation	241	219	22
Employees per driver	1.74	1.80	1.51
Employees per power unit	1.95	2.12	1.48
Employees per unit of equipment	1.18	1.21	1.01
Business turnover per employee	\$2,711	\$2,709	\$2,725
Business turnover per power unit	\$5,286	\$5,743	\$4,033

A9.8—Cost of Line Haul Plus Pick-Up and Delivery Services. On the basis of the figures developed above, the additional cost of less than truckload shipments over truckload shipments from Toronto to a small town, or *vice versa*, would be 13½ cents per 100 lb.; from Toronto to Hamilton, or *vice versa*, 15½ cents; and between two medium-size cities, 10 to 12 cents. A general average of \$2.50 per ton might be assumed.

If 9 cents per 100 lb. (an infrequent but not unusual rate) be looked upon as the bare cost of transport in truckload lots of easily handled, low grade freight, such as steel bars, between Toronto and Hamilton, 24 cents would appear to be a low minimum price for package freight picked up by pick-up and delivery trucks in Toronto and delivered similarly in Hamilton.

The standard rates of the Automotive Transport Association of Ontario (A.T.A. rates) from Toronto to Hamilton are 19 cents for fourth class; 22 cents for third class; 26 cents for second class; and 30 cents for first class.

If all freight were delivered through a terminal freight house, the A.T.A. rates would appear unprofitable, unless the proportion of first and second class freight of small bulk was most substantial.

A9.9—Estimated Minimum Cost of Freight Motor Transport. Summing up, motor transport costs are composed of the following factors, each having been charged with its own share of general overhead:

(a) Cost of Line Haul.

The average minimum cost of line haul is not less than 1/10 cent per mile per 100 lb.

(b) Costs of Loading and Unloading Highway Trucks.

Minimum cost of these combined operations averages but little less than 2½ cents per 100 lb.

(c) Cost of Clerical and Other Terminal Expenses, *Etc.*

A reasonable minimum average for this cost, which attaches to all transport movements, is 1½ cents per 100 lb.

(d) Cost of Pick-Up and Delivery.

This cost varies with the size of the terminal communities. The average cost per 100 lb. for either of these operations appears to be about as follows:

Toronto	9 cents
Hamilton, Windsor or equivalent community	6½ cents
Small cities	5 cents
Minimum	4 cents

The cost of transport in full truck loads is composed of items (a), (b), and (c); in less than truck load lots, of items (a), (b), (c) and (d).

Although the necessarily approximate nature of the above figures be granted, they are still sufficient to show the complete absurdity of pick-up and delivery transport rates between Toronto and Hamilton of 9, 10, 12 or even 15 cents. Not that selected items in substantial lots might not be carried much more cheaply than the average run of package freight. If classification be ignored, and the selection of freight be allowed, along with the freedom of each operator to fix his own rate, the evils of cut-throat competition will continue indefinitely.

The average rate received by Martin Transports in 1936 was 35.1 cents per 100 lb., or \$7.02 per ton. Pick-up and delivery costs, ranging from \$1.80 to \$3.10 per ton, depending on the terminals, would absorb 26% to 44% of the revenue, probably between 35% and 40%. Another 80 cents per ton, or 11% of the rate received, would be absorbed in labour charges for loading and unloading the highway trucks and in clerical and overhead expenses. Thus, 46 to 51% of the revenue is absorbed before line haul is considered at all.

On the basis of one operator's experience, 40% of all freight is delivered direct by highway truck. The weighted cost of the whole loading operation is \$2.30 per ton, estimated to represent pick-up, double warehousing, loading, unloading and delivery at \$3.30 per ton for 60% of the traffic, and loading and unloading only at 80 cents per ton for 40% of the traffic. The average cost per ton of the entire operations of six operators (Table A9.4) was \$4.15, so that terminal services represent 55% of the entire cost of operations. It appears safe to say that the cost of line haul averages not more than 50% of the entire cost of less-than-truckload transport. This deduction is borne out by the fact that almost 50% of power units and almost 50% of drivers are classed as allocated to the pick-up and delivery service.

A9.10—Depreciation of Motor Vehicles for the Transport of Freight.

A representative indication of the extent to which provision is made for the depreciation of motor vehicles for the haulage of freight is to be found in Table

A9.6. This shows the practice of fifteen public commercial vehicle operators whose operating statements were examined by the Commission.

From this Table, it is seen that the write-off in respect of vehicles for the last year reported averaged 14.49% of first cost and that the total write-off was 59.06% of first cost. The accrued allowance for depreciation of buildings and equipment other than vehicles was 17.37% of first cost.

A9.11—Equipment and Employees Required in P.C.V. Operations. Of paramount importance in the conduct of a motor trucking business is the matter of the equipment required and the employees needed, not only to operate the equipment, but also to perform the many other duties associated with such an enterprise.

From oral evidence heard by the Commission and from answers to questionnaires received by it, statistics of the number of units of various types of equipment owned and the number of employees of the various categories employed by eighteen public commercial vehicle operators are available. These eighteen operators included some of the largest, as well as some of the smallest, and would appear to represent a very fair cross-section of P.C.V. operations. The combined results are exhibited in Table A9.7.

In judging the business soundness of a motor trucking enterprise, it is useful to compare the amount of equipment and the number of employees utilized by large organizations and by small organizations, not only group with group, but also each group with the average for the total number of operators, large and small. To this end Table A9.8 has been prepared.

From this Table the difference in the conduct of large and small P.C.V. businesses is apparent. A small business requires proportionately a greater number of trucks and drivers and a lesser number of warehouse and office employees than does a large business. The latter, with greater quantities of freight to move, tends to the use of tractors, semi-trailers and double hook-ups, with fewer drivers to handle the freight on the road, and a larger proportion of office help and solicitors to keep the business running smoothly and uninterruptedly.

It is obvious that since the above represents average conditions, those operators doing the maximum amount of business with the minimum of equipment and personnel are the most prosperous. In the group of five large operators, the operators showing the best net results handle their share of the total business with from 10% to 20% less units of equipment and 10% to 30% less personnel than does the theoretical average operator of such group. This advantage arises from an excellent load factor, economically desirable lengths of haul and unquestionably capable management.

Amongst the smaller operators, the necessity of having adequate spare equipment appears to affect conditions of operation to a marked degree. There is little divergence from the *pro rata* amount of equipment to which each operator would be entitled on the basis of the business done. In this group as well, the more prosperous operators enjoy lengths of haul of 70 to 90 miles for a large proportion of their business.

Almost all companies, and particularly the small companies, have some proportion of their drivers serve part of the time as highway drivers and part of their time as pick-up and delivery drivers, either as a normal arrangement or as an emergency one. It is consequently difficult to specify the exact proportion of drivers who are highway drivers or who are pick-up and delivery drivers. The proportion varies considerably, but the average is nevertheless of value. Excluding one company, which handles a large amount of city

cartage, the average for the remaining companies is 51% of the total driving staff employed as highway drivers and 49% as pick-up and delivery drivers. As has been pointed out, this may include the reserve from which spare highway drivers are drawn.

Table A9.8—Estimated and Actual Equipment and Personnel Required for Conducting Assumed Volumes of Public Commercial Vehicle Business

Item	Total Annual Business and Basis of Numbers Given Below		
	Numbers Required for \$100,000 Business Proportioned to Actual Numbers for 18 P.C.V. Operators	Numbers Required for \$545,000 Business Proportioned to Actual Numbers for 5 Large P.C.V. Operators	Actual Numbers Used for \$545,000 Business by 13 Small P.C.V. Operators
Equipment			
Tractors	8	43	38
Trucks	11	52	112
Semi-trailers	9	52	40
Trailers	2	13	7
Dollies	1	5	2
Total pieces	31	165	199
Employees			
Drivers and helpers	21	112	135
Warehousemen	6	15	13
Garagemen	3	33	30
Office and solicitation	7	41	22
Total employees	37	201	200

APPENDIX A-X

TYPICAL RATES AND FARES

A10.1—Rates of Canada Steamship Lines, Ltd. Typical competitive rates charged by Canada Steamship Lines, Ltd., for typical movements of various commodities are indicated in Table A10.1, with the corresponding railway P. and D. Group 4 rates for less than carload movements.

Table A10.1—Rates per 100 Pounds Charged by Canada Steamship Lines, Ltd., for Less than Carload and Carload Shipments for Typical Movements

Movement	Canada Steamship Lines Per 100 Pounds			Railway
	L. C. L. Rate, Cents	Carload		P. and D.
		Minimum Wt., Lb.	Rate, Cents	Fourth Group Rate, Cents
<i>Canned Goods</i>				
Whitby (<i>via</i> Toronto) to Montreal	30	24,000	20	52
St. Catharines to Montreal	28	24,000	20	55
Windsor to Montreal	35	24,000	30	72
Picton (and points <i>via</i> Picton) to Montreal	25	20,000	20	50
Carload rates include cartage at destina- tion up to 3 cents per 100 lb.				
Cartage to Picton up to 5 cents per 100 lb. absorbed.				
<i>Paint Products</i>				
Windsor to Montreal (door to door)	65 (Min. 98 cents)		..	72
Montreal to Toronto (if siding each point) ..	..	20,000	35½	
<i>Sugar</i> (any quantity)				
Toronto to Windsor (door to door)	25 (Min. 75 cents)		..	43
(Cartage at Windsor not to exceed 5 cents bag absorbed).				
<i>Rubber Goods</i>				
Toronto to Montreal (door to door)	40	...	..	70
Hamilton to Montreal (door to door) ..	40	...	..	86
<i>Books</i> (any quantity)				
(Truck, competitive)				
Toronto to Montreal	50	...	..	70
<i>Denatured Alcohol in Drums</i>				
<i>Anti-Freeze in Drums</i>				
Toronto to Windsor				
Walkerville to Toronto .....	..	30,000	27½	..
<i>Paper Boxes</i> (Knocked Down)				
Hamilton (if siding) to Wallaceburg (if siding) .....	..	20,000	24½	..
Hamilton (if siding) to Picton (if siding) .....	..	20,000	25	..
<i>Steel Sheets</i>				
Hamilton to Windsor .....	..	30,000	18	..
Hamilton to Montreal .....	..	60,000	18	..
<i>Copper, Bronze and Brass Products</i>				
Toronto to Montreal (door to door), any quantity	40 (Min. 45 cents)		..	70

A10.2—Minimum Motor Transport Rates Paid by Canadian Cannery, Ltd. The minimum rates paid to transport operators by Canadian Cannery, Ltd., for the transport of canned goods, as given in the evidence of Mr. Caldwell representing that company, are shown in Table A10.2. The rates paid on truckload or less-than-truckload lots appear to average around 60 per cent. of the

rates recommended by the Automotive Transport Association, or railway pick-up and delivery rates. If the rates quoted by a selected motor transport are not the lowest rates available to the trade, the customer will in many instances instruct Canadian Cannerymen to ship goods only by the trucker quoting the lowest rates.¹

A10.3—Motor Transport Rates Paid by National Grocers, Ltd. The general level of rates paid by National Grocers, Ltd., for transport by motor truck is indicated in Table A10.3, which cites the rates paid for twenty-four characteristic movements, and, at the same time, the comparable rates under the Automotive Transport Association tariff and under Group 4 of the railway pick-up and delivery tariff. They average 77.2 per cent. of the respective A.T.A. rates and 76.2 per cent. of the railway P. and D. rates. In most instances the transport operator has his headquarters in the city or town named.

A10.4—Comparison of Railway and Motor Coach Fares. Reference has been made in Chapter X to Table A10.4, which was submitted by the Ontario Association of Motor Coach Operators. This table, which follows, affords a ready comparison of typical railway and motor coach passenger fares charged between Toronto and 57 other points.

¹Evidence, pp. 5578-5593.

Table A10.2—Rates in Cents per 100 Pounds Paid to Motor Transports by Canadian Cannery, Ltd., on Truckload or Less-Than-Truckload Lots

Notes: East of Toronto, goods are sold F.O.B. factory, and the customer pays for transport.

See Evidence, pages 5578 to 5593.

Movement	Miles	Rates Paid to Truckers by Canadian Cannery	A.T.A. Fourth Class Rate and Railway P. and D. Fourth Group Rate
CLASSES "A" AND "C" TRANSPORTS			
<i>To Toronto From</i>			
Port Hope	63	12	29
and points East to Picton	137	12	37
and Napanee	141	12	37
<i>From Simcoe to</i>			
Galt and Preston	40-43	15	27
Hespeler and Guelph	46-55	18	27
London	59	15	24
Stratford	73	25	34
Toronto	83	15	34
Windsor	177	30	41
<i>From St. Catharines to</i>			
Galt and Preston	59-62	15	29
Toronto	71	15	29
Stratford	97	30	34
London	114	20	36
St. Thomas	132	25	36
Windsor	233	35	43
<i>From Hamilton to</i>			
Toronto	43	8	(19 A.T.A. (24 Ry. P. and D.
Stratford	63	20	29
London	80	15	32
Owen Sound	113	27	41
Chatham	147	30	37
Windsor	198	30	43
CLASS "D" TRANSPORTS			
Strathroy to Hamilton	101	20	34
		15 Full load	
Forest to Hamilton	145	20	37
		15 Full load	
Burlington to Sarnia	157	30	41

**Table A10.3—Rates in Cents per 100 Pounds Paid to Motor Transports
by National Grocers, Ltd., on Less-Than-Truckload Lots**

See Evidence, pages 5213, 5233, 5255.

Toronto to	Miles	Rates Paid to Truckers by National Grocers	A.T.A. Fourth Class	Railway P. and D. Fourth Group
Oshawa	34	10	19	24
Hamilton	43	10	19	24
Guelph	52	16	25	25
Brantford	66	20	27	27
Kitchener	71	12	27	27
St. Catharines	71	18	29	29
Lindsay	77	25	29	29
Orillia	82	20	34	34
Niagara Falls	84	22½	32	32
Collingwood	92	25	34	34
Peterborough	92	45	32	32
Stratford	98	20	34	34
London	114	17½	36	36
Belleville	115	20	36	36
Owen Sound	116	25	37	37
St. Thomas	132	25	36	36
Kingston	166	30	41	41
Sarnia	181	40	41	41
Chatham	190	40	43	43
North Bay	220	45	45	45
Windsor	241	35	43	43
Cornwall	275	50	50	50
Ottawa	280	40	47	47
Pembroke	280-327	40	47	47

Table A10.4—Comparative Railway and Motor Coach Fares and Rates in Cents Per Mile for Typical Cases

BETWEEN TORONTO AND	Distance in Miles	Regular One-way Rates			Regular Return Rates			Rail Special Reduced Return Fares		
		Fare		Cents per Mile	Fare		Cents per Mile	Week-end Excur.		Rate per Mile
		Rail	Highway		Rail	Highway		Fare	Rate per Mile	
Acton	35.5	\$1.10	.95	3.10	2.13	\$2.00	1.91	\$1.40	1.97	.75
Alliston	49.6	1.50	1.50	3.02	2.65	2.70	2.82	1.90	1.92	1.05
Aurora	30.0	.90	.75	3.00	2.90	1.60	2.67	1.15	1.01	1.25
Barrie	64.1	1.90	1.65	2.96	2.82	3.40	2.52	2.40	1.87	1.01
Beamsville	59.7	1.80	1.55	3.02	2.68	3.25	2.72	2.25	1.88	1.02
Belleville	113.1	3.45	3.00	3.05	2.60	6.20	2.34	4.35	1.92	1.02
Bowmanville	43.8	1.30	1.05	2.97	2.50	2.35	2.26	1.65	1.88	1.03
Bracebridge	122.1	3.70	3.35	3.03	2.83	6.65	2.74	4.65	1.90	1.02
Brampton	21.2	.65	.60	3.07	2.39	1.15	2.72	.85	2.00	.75
Brantford	64.8	1.85	1.65	2.85	2.49	3.35	2.21	2.35	1.81	1.25
Brockville	208.2	6.25	4.75	3.00	2.18	11.25	1.96	7.85	1.88	1.01
Buffalo	118.3	3.25	2.80	2.74	2.57	5.85	2.32	4.10	1.73	2.15
Burlington	32.0	.95	.90	2.96	2.54	1.70	2.26	1.20	1.87	1.17
Callander	219.7	6.60	5.95	3.01	2.77	11.90	2.71	8.25	1.88	1.00
Chatham	184.4	5.40	4.25	2.92	2.22	9.70	2.64	6.75	1.84	1.00
Collingwood	94.4	2.25	2.75	2.38	2.61	4.60	2.44	3.20	1.69	.98
Cornwall	266.2	8.00	6.10	3.00	2.18	14.40	1.97	10.00	1.88	1.00
Detroit	231.3	6.40	5.10	2.77	2.10	11.50	1.89	8.00	1.73	.97
Elmvalle	91.8	2.60	2.15	2.84	2.86	4.70	2.56	3.25	1.77	.95
Elora	63.0	1.90	1.50	3.02	2.06	3.40	2.70	2.40	1.91	1.03
Galt	57.2	1.75	1.75	3.06	2.36	3.15	2.75	2.06	1.92	1.20
Georgetown	29.3	.90	.75	3.07	2.08	1.60	1.87	1.15	1.97	.75
Gravenhurst	112.7	3.35	3.00	2.97	2.80	6.05	2.68	4.20	1.86	1.28
Grimsby	55.5	1.70	1.40	3.06	2.62	3.05	2.55	2.25	1.04	1.05
Guelph	48.7	1.50	1.20	3.08	2.07	2.70	1.81	1.90	1.95	1.00
Hamilton	39.3	1.15	1.00	2.93	2.28	2.05	2.61	1.45	1.84	.80
Huntsville	146.2	4.40	3.95	3.01	2.78	7.90	2.50	5.50	1.83	1.01
Ingersoll	100.8	2.85	2.75	2.83	2.56	5.15	2.56	3.60	1.79	.94
Kingston	167.4	4.85	4.00	3.02	2.39	8.75	2.72	6.10	1.90	1.00
Kitchener	62.5	1.85	1.60	2.96	2.14	3.35	1.79	2.35	1.88	1.25
Lindsay	69.3	2.10	1.85	3.03	2.38	3.80	2.74	2.65	1.91	1.40
Markham	22.3	.70	.60	3.14	2.68	1.25	2.38	.90	2.02	.75
Midland	118.8	3.05	2.65	2.57	2.32	5.50	2.62	3.85	1.62	.86
Montreal	333.8	10.00	7.50	3.00	2.08	18.00	1.87	12.50	1.85	6.00

Table A10.4—Continued

BETWEEN TORONTO AND	Distance in Miles		Regular		One-way Rates		Regular		Return Rates		Rail Special		Reduced		Return		Fares	
			Fare		Cents per Mile		Fare		Cents per Mile		Week-end		Excur.		Cent-per-mile		Excur.	
	Rail	Highway	Rail	Highway	Rail	Highway	Rail	Highway	Rail	Highway	Fare	Rate per Mile	Fare	Rate per Mile	Fare	Rate per Mile	Fare	Rate per Mile
Newmarket	34.1	30.2	\$1.00	.90	2.93	2.98	\$1.80	\$1.60	2.64	2.65	1.25	1.25	.75	1.25	.75	1.10		
Niagara Falls ...	82.6	85.7	2.30	2.25	2.79	2.63	4.50	4.05	2.72	2.36	3.15	1.91	1.65	1.91	1.65	1.00		
North Bay	227.9	223.1	6.85	6.10	3.01	2.74	12.35	11.00	2.71	2.46	8.60	1.89	4.55	1.89	4.55	1.00		
Oakville	21.3	23.1	.65	.55	3.05	2.38	1.15	1.00	2.70	2.16	.85	1.99	.75	1.99	.75	1.76		
Orillia	86.3	82.4	2.55	2.25	2.96	2.73	4.60	4.05	2.66	2.46	3.20	1.85	1.70	1.85	1.70	.99		
Oshawa	33.3	32.4	1.00	.85	3.00	2.62	1.80	1.55	2.70	2.39	1.25	1.88	.75	1.88	.75	1.13		
Ottawa	246.7	297.8	7.40	5.90	3.00	1.98	13.30	10.65	2.69	1.79	9.25	1.87	5.00	1.87	5.00	1.01		
Owen Sound ...	128.8	145.7	3.60	3.40	2.80	2.34	6.50	6.10	2.52	2.09	4.50	1.75	2.40	1.75	2.40	.93		
Parry Sound ...	130.0	172.9	4.50	4.30	3.00	2.49	8.10	7.75	2.70	2.24	5.65	1.88	3.05	1.88	3.05	1.02		
Peterborough ...	92.2	93.9	2.30	2.50	2.49	2.66	4.15	4.50	2.48	2.40	2.90	1.57	1.55	1.57	1.55	.84		
Port Hope	63.0	64.1	1.90	1.70	3.02	2.65	3.40	3.05	2.70	2.38	2.40	1.90	1.30	1.90	1.30	1.03		
Powassan	207.8	203.1	6.25	5.60	3.01	2.76	11.25	10.10	2.70	2.49	7.85	1.89	4.20	1.89	4.20	1.01		
St. Catharines ..	71.2	71.1	2.15	1.85	3.02	2.60	3.85	3.33	2.70	2.36	2.70	1.89	1.47	1.89	1.47	1.02		
St. Mary's	98.5	114.1	3.00	2.60	3.05	2.28	5.40	4.70	2.74	2.06	3.75	1.90	2.00	1.90	2.00	1.01		
St. Thomas	121.4	140.2	3.60	3.40	2.96	2.43	6.50	6.15	2.67	2.19	4.50	1.85	2.80	1.85	2.80	1.15		
Stouffville	28.7	30.5	.85	.85	2.96	2.79	1.55	1.55	2.70	2.54	1.10	1.92	.75	1.92	.75	1.15		
Stratford	82.3	101.9	2.65	2.25	3.22	2.21	4.75	4.05	2.89	1.99	3.35	2.03	1.80	2.03	1.80	1.09		
Sundridge	183.2	177.1	5.50	4.90	3.00	2.76	9.90	8.80	2.70	2.48	6.90	1.88	3.65	1.88	3.65	1.00		
Trout Creek ...	200.2	193.1	6.00	5.35	3.00	2.77	10.80	9.65	2.70	2.50	7.50	1.87	4.00	1.87	4.00	1.00		
Uxbridge	40.9	49.1	1.20	1.20	2.93	2.45	2.15	2.15	2.63	2.19	1.50	1.83	.80	1.83	.80	.98		
Whitby	28.9	28.9	.85	.70	2.93	2.42	1.53	1.25	2.68	2.16	1.10	1.90	.75	1.90	.75	1.30		
Windsor	230.0	266.1	6.40	5.10	2.78	1.92	11.50	9.20	2.50	1.73	8.00	1.74	4.50	1.74	4.50	.98		
Woodstock	87.8	94.1	2.60	2.60	2.96	2.76	4.70	4.70	2.68	2.50	3.25	1.85	1.75	1.85	1.75	1.00		

APPENDIX A-XIII

ALLOCATION OF THE COST OF THE HIGHWAYS

SECTION 1—ESTIMATES OF THE SOCIAL-NECESSITY VALUE OF ROADS

A13.1—Per Capita Basis of Social-Necessity Value. As has been pointed out in Chapt. XIII, the social-necessity value of the roads or streets in a given area, rural or urban, as measured by the annual expenditure on them, willingly made, appears to be measurably proportionate to the number of people locally served by such roads and streets.

An indication of the comparative constancy of the per capita value of social necessity will be found in a study of the actual expenditure on roads and streets for various years, both before and after the advent of the motor car.

A13.2—Per Capita Expenditures on Rural Roads, 1913. In the year 1913 there were nineteen counties which had adopted the county road system under the legislation of 1901. Nine of these, namely, Lanark, Simcoe, Wellington, Peel, Prince Edward, Halton, Perth, Leeds-Grenville and Haldimand were essentially agricultural, without either widely-spread urban development or any extended areas of non-agricultural land.

The average expenditures per capita, by these counties, and by the townships included in them, for their own rural roads were as shown in Table A13.1. These amounts are exclusive of any provincial grants received by the counties and represent what the rural residents of the particular county evidently felt they could afford to pay for roads during 1913. The figures consequently provide an indication of the annual social-necessity value of the roads to the municipality concerned.

Table A13.1—Expenditure on Rural Roads by Nine Typical Agricultural Counties of Ontario and Their Townships for 1913, Exclusive of Any Provincial Grant Received

Counties	Year County Road System Established	County Population, Exclusive of Cities and Separated Towns (a)	Township Population	County Road Expenditure (b)		Township Road Expenditure (c)		Total Expenditure
				Total	Per Capita	Total	Per Capita	Per Capita
Lanark	1903	26,259	15,773	\$12,506	\$0.48	\$18,623	\$1.18	\$1.66
Simcoe	1903	80,892	43,518	20,469	0.25	73,389	1.69	1.94
Wellington	1903	36,979	26,147	36,852	1.00	73,089	2.79	3.79
Peel	1906	19,402	14,924	51,805	2.67	60,639	4.06	6.73
Prince Edward	1907	15,644	11,091	11,303	0.72	10,524	0.95	1.67
Halton	1907	20,880	11,347	56,821	2.72	40,295	3.55	6.27
Perth	1907	30,152	25,086	24,391	0.81	81,255	3.24	4.05
Leeds-Grenville	1910	37,309	28,414	33,879	0.91	72,677	2.56	3.47
Haldimand ...	1911	20,372	13,326	40,669	2.00	22,291	1.67	3.67
Totals		287,889	189,626	\$288,695	...	\$452,782	...	...
Averages .....		...	...	...	\$1.00	...	\$2.39	\$3.39

- (a) Municipal Statistics for 1913, Department of Agriculture, Bureau of Industries.
 (b) Report of Department of Public Highways, 1918.
 (c) Report of Department of Public Highways, 1918, p. 19.

Any monies received from the Province are properly to be regarded as a governmental provision for non-local uses of the highways. Nevertheless, as the nineteen counties may have been disposed to regard the aid so received as in some degree constituting a provincial shouldering of local burdens, and may have eased up on their own expenditures, the amounts expended by the townships within these counties, which then enjoyed no provincial subsidy, are probably a fairer indication of social-necessity value than are the expenditures of the counties enjoying such.

The total rural or township population included in the nine selected counties was, using round numbers, 190,000 out of a total rural population of 1,014,000 in the Province. The average expenditures by all townships in these nine counties during 1913 was \$2.39 per capita, while by all townships other than those included in these specific counties and in semi-urban York County it was \$2.64. It would tend to be higher (estimated as \$2.67) in townships not included in the nineteen counties that had adopted the county road system.

A13.3—Per Capita Expenditure on Rural Road, 1918. In 1918, at the end of a period of diminished road work due to lack of labour and the expenditure of energy and money in other directions, there were twenty-five counties enjoying provincial grants under the county road legislation. Of these counties, fifteen were fully developed and essentially agricultural counties containing neither extensive urban development nor large areas of non-agricultural land. The county expenditure per capita, and the per capita expenditures of the townships in these counties were as indicated in Table A13.2. In the case of Lanark and Wellington the county expenditure may be slightly affected by contributions from Smith's Falls and Guelph under suburban area agreements, but these counties are included for comparison with 1913. The county expenditures are very slightly lower than in 1913, but the township expenditures are appreciably lower, as is the average for the counties and townships combined.

A13.4—Per Capita Expenditures on Rural Roads, 1924—In 1924 the provincial road system had taken shape, and road construction by all authorities was in full swing. During this year expenditure by the townships within the county road area, exclusive of provincial grants, was \$2,473,161,¹ or \$2.61 per capita (estimated as \$1.05 for construction and \$1.56 for maintenance).

Expenditures by counties, less repayments by cities and separated towns, and less the provincial grants, totalled very close to \$3,280,000,² these counties having a population within the county road system area, and exclusive of cities and separated towns, of 1,365,000. This represented a per capita expenditure of \$2.40 (estimated as \$1.58 for construction and \$0.82 for maintenance).

The total assessment on the counties for King's Highway construction and maintenance for the year 1924 was \$1,286,099,³ or \$0.94 per capita (estimated as \$0.70 for construction and \$0.24 for maintenance).

The average total road expenditure per capita carried by the rural population for this year, including assessments for the King's Highways, was \$5.95 (estimated as \$3.33 for construction and \$2.62 for maintenance).

For the fifteen counties mentioned in Art. A13.3, the expenditures, total and per capita, are as set out in Table A13.3 for the year 1924. Excluding three of these counties, Lanark, Wellington and Kent, in which contributions by cities occur, the per capita expenditure on construction and maintenance by the farming population in the twelve remaining representative counties was

¹Report of the Department of Public Highways, 1923-4-5, p. 60.

²*Ibid.*, pp. 24, 49, 51.

³*Ibid.*, pp. 76, 77, 78.

Table A13.2—Expenditure on Rural Roads by Fifteen Typical Agricultural Counties of Ontario and Their Townships for 1918, Exclusive of Any Provincial Grants Received

Counties	Year County Road System Established	County Population, Exclusive of Cities or Separated Towns (a)	Township Popula- tion (a)	County Road Expenditure (b)		Township Road Expenditure (c)		Total Rural Expenditure	
				Total	Per Capita	Total	Per Capita	Total	Per Capita
Lanark	1903	24,944	14,802	\$42,162 (d)	\$1.69	\$10,636	\$0.72	\$24.41	
Simcoe	1903	80,303	40,582	45,981	0.57	53,382	1.32	1.89	
Wellington	1903	34,422	24,135	49,373 (e)	1.43	42,836	1.77	3.20	
Peel	1906	19,493	13,600	18,776	0.97	22,549	1.66	2.63	
Prince Edward	1907	14,570	10,530	24,528	1.68	6,504	0.62	2.30	
Halton	1907	20,885	10,667	37,764	1.81	24,768	2.32	4.13	
Perth	1907	28,836	23,953	17,245	0.60	57,493	2.40	3.00	
Leeds-Grenville	1910	36,063	27,729	27,084	0.75	70,686	2.55	3.30	
Haldimand	1911	19,757	13,029	12,365	0.63	24,290	1.86	2.49	
Stormont, Dundas and Glengarry	1917	63,108	49,976	103,168	1.63	57,808	1.16	2.79	
Huron	1917	47,770	32,323	38,680	0.81	60,690	1.88	2.69	
Kent	1917	42,859	29,126	36,803	0.87	38,456	1.32	2.19	
Norfolk	1917	24,368	16,750	19,393	0.80	28,545	1.70	2.50	
Northumberland and Durham	1918	51,982	32,731	33,868	0.65	39,083	1.19	1.84	
Dufferin	1918	14,833	11,142	11,502	0.78	17,462	1.57	2.35	
Totals		523,603	351,075	\$518,692	...	\$555,188	...	...
Averages		...	...	...	\$0.99	...	\$1.58	\$2.57	
					\$0.92 (f)		\$1.61 (f)	\$2.53 (f)	

(a) Municipal Statistics for 1918, Department of Agriculture, Bureau of Industries.

(b) Report of Department of Public Highways, 1918.

(c) Report of Department of Public Highways, 1918, p. 19.

(d) Includes expenditure of Smith's Falls on suburban roads.

(e) Includes expenditure of Guelph on suburban roads.

(f) Excluding Lanark and Wellington.

Table A13.3—Expenditure on Rural Roads by Fifteen Typical Agricultural Counties of Ontario and Their Townships for 1924, Exclusive of Any Provincial Grants Received

Counties	County Population, Exclusive of Cities or Separated Towns (a)	Township Population (a)	County Road Expenditure (b)		King's Highway Assessment (c)		Township Road Expenditure (d)		Total Rural Expenditure Per Capita	
			Total	Per Capita	Total	Per Capita	Total	Per Capita	Total	Per Capita
Lanark	24,524	13,504	\$91,958 (e)	\$3.75	\$32,071	\$1.31	\$10,990	\$0.81	\$5.87	\$5.87
Simcoe	79,907	38,908	99,014	1.24	28,496	0.36	59,625	1.53	3.13	3.13
Wellington	34,542	24,486	98,640 (f)	2.86	32,880	0.95	54,800	2.24	6.05	6.05
Peel	23,081	15,808	88,485	3.83	47,166	2.04	68,225	4.32	10.19	10.19
Prince Edward	14,748	10,222	31,234	2.12	13,135	0.89	3,785	0.37	3.38	3.38
Haldon	23,945	12,038	96,703	4.04	34,522	1.44	40,970	3.40	8.88	8.88
Perth	28,911	23,732	34,742	1.20	69,294	2.40	84,795	3.57	7.17	7.17
Leeds-Grenville	31,434	26,341	83,480	2.66	26,787	0.85	75,030	2.85	6.36	6.36
Haldimand	20,164	13,034	27,554	1.37	62,799	3.11	29,315	2.25	6.73	6.73
Stormont, Dundas and Glengarry	59,552	43,065	216,165	3.63	44,295	0.74	120,515	2.80	7.17	7.17
Huron	45,203	30,287	89,665	1.98	6,750	0.15	74,425	2.46	4.59	4.59
Kent	42,529	28,449	146,312 (g)	3.44	47,452	1.12	87,645	3.08	7.64	7.64
Norfolk	25,331	17,062	107,996	4.26	9,274	0.37	41,660	2.44	7.07	7.07
Northumberland and Durham	52,894	32,190	56,413	1.07	75,121	1.42	73,775	2.29	4.78	4.78
Dufferin	15,491	11,061	37,268	2.41	4,729	0.31	36,380	3.29	6.01	6.01
Totals	522,256	340,187	\$1,305,629	...	\$534,771	...	\$861,935	...	...	...
Averages	...	...	...	\$2.50	...	\$1.02	...	\$2.53	\$6.05	\$6.05
				\$2.30 (h)	...	\$1.00 (h)	...	\$2.59 (h)	\$5.89 (h)	\$5.89 (h)

(a) Bureau of Municipal Affairs, Municipal Statistics, 1924.

(b) Report of Public Highways Department, 1924, pp. 45, 49.

(c) Report of Public Highways Department, 1924, pp. 76-7-8.

(d) Public Accounts, 1925, p. K10.

(e) Includes expenditure of Smith's Falls on suburban roads.

(f) Includes expenditure of Guelph on suburban roads.

(g) Includes expenditure of Chatham on suburban roads.

(h) Excluding Lanark, Wellington and Kent.

\$5.89, including \$1.00 paid towards the King's Highways, or very little different from the average expenditure by the agricultural communities as determined for the entire southerly part of the Province operating under the county road legislation.

A13.5—Per Capita Expenditure on Rural Roads, 1930. The introduction of county suburban road systems in counties containing a city or separated town is reflected in the road costs for such counties and prevents a direct comparison of the expenditures in them for 1930 and 1935 with those of former years or with those of other counties not so affected.

Of the fifteen counties shown in Table A13.3, for 1924, only six were available for comparison on the basis adopted for the years 1913, 1918 and 1924. Statistics for these six counties, namely, Simcoe, Prince Edward, Haldimand, Huron, Northumberland and Durham, and Dufferin, for the year 1930, are given in Table A13.4. The sequence of the counties is the order in which they commenced operations under the Highway Improvement Act of 1901. In 1930 they contained 12.0 per cent. and 10.8 per cent. of the rural population and of the urban population of the Province, respectively, and in 1935, 11.4 per cent. and 10.6 per cent., respectively.

In 1930, expenditures varied considerably with the counties, but township expenditures, representing almost entirely work paid out of the year's tax levy, were more consistent. The average county expenditure per head, was \$3.38 (estimated as \$2.51 for construction and \$0.87 for maintenance); the average township expenditure per head was \$3.57 (estimated as \$1.95 for construction and \$1.62 for maintenance); and the assessment for King's Highways was \$1.83 (estimated as \$1.50 for construction and \$0.33 for maintenance); or a total expenditure per rural inhabitant of these six counties of \$5.96 for construction and \$2.82 for maintenance.

A13.6—Per Capita Expenditure on Rural Roads, 1935. Expenditures by all authorities in 1935 showed the effects of the depression. Table A13.5 gives the per capita expenditures for the rural population in the six counties to which reference has previously been made. County expenditure ranged from 38 cents per capita, in the case of Northumberland and Durham, to \$2.01 per capita, in the case of Haldimand. The average expenditure per county inhabitant was 91 cents.

Township expenditures ranged from \$1.60 per capita, in the case of Simcoe, to \$3.77 per capita in the case of Dufferin, with an average expenditure per township inhabitant of \$2.06. This was the first year that the municipalities were not called upon to pay a proportion of the King's Highway expenditure.

Total expenditure per rural inhabitant ranged from \$2.23 to \$5.22 and averaged \$2.97, 95 cents of which was for construction and \$2.02 for maintenance. It is reasonable to assume that expenditures during 1935 were not more than those that the local authorities believed could not be avoided, and that they are more representative of bare social-necessity value than similar figures for more prosperous years.

A13.7—Comparisons of Rural Per Capita Expenditures at Successive Times. Table A13.6 contains a summary of the per capita road expenditures by the typical groups of rural municipalities that have been considered above. It is evident from it that rural communities have been prepared to spend annually on roads through their township councils, an amount averaging \$2.50 per capita, and more variable annual amounts through their county councils. The combined township and county expenditure per capita of the rural in-

Table A13.4—Expenditure on Rural Roads by Six Typical Agricultural Counties of Ontario and Their Townships for 1930, Exclusive of Any Provincial Grants Received

Counties	County Population, Exclusive of Cities or Separated Towns (a)	Township Population (a)	County Road Expenditure (b)		King's Highway Assessment (c)		Township Road Expenditure (d)		Total Expenditure of Rural Population
			Total	Per Capita	Total	Per Capita	Total	Per Capita	
Simcoe	76,412	37,072	\$112,180	\$1.47	\$198,475	\$2.60	\$95,568	\$2.58	\$6.65
Prince Edward	14,606	9,923	181,618	12.43	16,325	1.12	26,566	2.66	16.21
Haldimand	19,898	12,625	133,420	6.71	53,711	2.70	65,319	3.17	14.58
Huron	43,070	29,449	67,963	1.58	57,822	1.34	97,598	3.31	6.23
Northumberland and Durham	51,887	31,437	210,699	4.06	54,864	1.06	127,569	4.06	9.18
Dufferin	14,569	10,069	39,131	2.69	21,478	1.47	52,703	5.23	9.39
Totals	220,442	130,575	\$745,011	\$3.38(e)	\$402,675	\$1.83(g)	\$465,323	\$3.57(f)	\$8.78

(a) Bureau of Municipal Affairs, Municipal Statistics, 1930.

(b) Report of Department of Highways, 1930, pp. 82, 83.

(c) Report of Department of Highways, 1930, pp. 72, 73.

(d) Developed from Statistics in The Public Accounts for 1931, p. L56, and Report of the Department of Highways, 1930, p. 87.

(e) \$2.51 for construction, \$0.87 for maintenance.

(f) \$1.95 for construction, \$1.62 for maintenance.

(g) \$1.50 for construction, \$0.33 for maintenance.

Table A13.5—Expenditure on Rural Roads by Six Typical Agricultural Counties of Ontario and Their Townships for 1935, Exclusive of Any Provincial Grants Received

Counties	County Population, Exclusive of Cities or Separated Towns (a)	Township Population (a)	County Road Expenditure (b)		King's Highway Assessment		Township Road Expenditure (c)		Total Expenditure Per Capita of Rural Population
			Total	Per Capita	Total	Per Capita	Total	Per Capita	
Simcoe	78,829	37,900	\$53,510	\$0.68	Nil	Nil	\$60,809	\$1.60	\$2.28
Prince Edward	15,501	10,352	21,308	1.37	Nil	Nil	18,376	1.78	3.15
Haldimand	20,939	13,081	42,020	2.01	Nil	Nil	39,569	3.03	5.04
Huron	43,841	30,153	48,842	1.11	Nil	Nil	59,408	1.97	3.08
Northumberland and Durham	53,558	32,436	20,182	0.38	Nil	Nil	60,076	1.85	2.25
Dufferin	14,648	10,182	21,206	1.45	Nil	Nil	38,401	3.77	5.22
Totals	227,316	134,104	\$207,068	\$0.91 (d)			\$276,639	\$2.06 (e)	\$2.97

(a) Bureau of Municipal Affairs, Municipal Statistics, 1935.

(b) Report of the Department of Highways, 1936, pp. 54-55.

(c) Developed from Statistics in The Public Accounts for 1935-1936, p. F31, and Report of the Department of Highways, 1936, p. 59.

(d) \$0.36 for construction, \$0.55 for maintenance.

(e) \$0.59 for construction, \$1.47 for maintenance.

Table A13.6—Total Per Capita Expenditure by Rural Communities in Ontario on County and Township Roads for the Years 1913, 1918, 1924, 1930 and 1935, Exclusive of Contributions by Towns or Cities, or of Provincial Grants, or Assessments for the King's Highways

Municipalities, or Groups of Municipalities	Year			
	1913	1918	1924	1935
(1) COUNTY EXPENDITURE				
Nine agricultural counties in county road system	\$1.00	...	...	...
Thirteen (twelve 1924) agricultural counties in county road system .....	...	\$0.92	\$2.30	...
All counties within the county road system .....	...	...	\$2.40	...
Six agricultural counties in county road system .....	...	...	...	\$3.38
...	...	...	...	\$0.91
(2) TOWNSHIP EXPENDITURE				
Townships in nine agricultural counties in county road system	\$2.39	...	...	...
Townships outside county road system	\$2.67	...	...	...
Townships in thirteen (twelve 1924) agricultural counties in county road system ..	...	\$1.61	\$2.59	...
All townships within county road system .....	...	...	\$2.61	...
Townships in six agricultural counties .....	...	...	...	\$3.57
...	...	...	...	\$2.06
(3) COUNTY AND TOWNSHIP EXPENDITURE COMBINED				
Township population in nine agricultural counties in county road system	\$3.39	...	...	...
Township population in thirteen (twelve 1924) agricultural counties in county road system .....	...	...	...	...
All township population within county road system .....	...	\$2.53	\$4.89	...
Township population outside county road system .....	...	...	\$5.01	...
Township population in six agricultural counties in county road system	\$2.67	...	...	...
...	...	...	...	\$6.95
...	...	...	...	\$2.97

Table A13.7—Average Annual Per Capita Expenditures on Urban Streets For Both Construction and Maintenance During Five-Year Periods

Note: Statement includes all expenditures on roads within municipality except street lighting, sidewalks, main drainage, boulevards, trees, sewers or other utility services.

City or Town	(1) CONSTRUCTION							(2) MAINTENANCE	
	1900-4	1905-9	1910-14	1915-19	1920-4	1925-9	1930-4	1935-6	
Toronto .....	...	...	...	\$3.12	\$7.09	\$5.09	\$5.68	\$1.26	
Hamilton and London	\$0.42(a)	\$1.20(a)	\$2.48	1.26	3.36	3.39	3.08	0.86	
Toronto, Hamilton and London .....	...	...	...	2.65	6.15	4.66	4.99	1.15	
London, Belleville, Stratford, Guelph and Kingston	0.42(a)	1.88(f)	2.00	1.43	5.58	2.40	1.34	0.57	
Belleville, Stratford, Guelph, Kingston, Barrie and Lindsay .....	...	4.02(g)	2.70	1.22	7.27	3.14	1.90	0.37	
Toronto .....	...	...	...	1.75	2.27	2.02	1.77	1.23	
Hamilton and London	0.84(a)	1.00(a)	1.61	1.56	2.04	1.89	1.46	1.11	
Toronto, Hamilton and London .....	...	...	...	1.71	2.21	1.98	1.69	1.20	
London, Belleville, Stratford, Guelph and Kingston	0.59(b)	0.72(b)	0.95(c)	1.02	1.57	1.76	1.69	1.68	
Belleville, Stratford, Guelph, Kingston, Barrie and Lindsay	0.30(d)	0.39(d)	0.61(e)	0.69	1.11	1.23	1.29	1.14	

(a) London only. (b) London, Guelph and Kingston only. (c) London, Stratford, Guelph and Kingston.

(d) Guelph, Kingston and Barrie. (e) Stratford, Guelph, Kingston, Barrie and Lindsay.

(f) London and Guelph. (g) Guelph only.

habitant, exclusive of assessment for the King's Highways, has been \$3.39 in 1913, \$2.53 in 1918, \$4.89 in 1924, \$6.95 in 1930 and \$2.97 in 1935. The latter figure more or less corresponding to that for 1918, or for the expenditures of \$2.67 by the townships outside the county road area in 1913, is thought to represent more closely bare social-necessity value than the figures for 1924 and 1930, where the social-necessity value is probably obscured by some assumption of non-local obligations respecting traffic facilities.

A13.8—Per Capita Expenditure of Urban Municipalities on Streets and Roads. It is useful to compare the per capita expenditures that have been made on urban streets and roads with those already found for rural roads.

Table A13.7 displays the average per capita costs of urban streets and roads for both construction and maintenance during eight different year-groups. From the facts there indicated, it seems reasonable to conclude that between 1905 and 1919, during the years when the motor vehicle was either non-existent or still a luxury in most communities in Ontario, such communities were prepared to expend from 39 cents to \$1.75 per capita on street maintenance, and an average of slightly in excess of \$2.00 per head on construction. The total expenditure for construction and maintenance was as set out in Table A13.8.

While the results from the limited information available cannot be wholly conclusive, they do indicate that both the rural resident and the urban resident are required or are prepared to pay, or commit themselves to pay, not dissimilar annual amounts to obtain the travelled way upon the roads and streets they use, and that this amount per capita in the days immediately preceding and succeeding the advent of the motor car was approximately \$3.00 per capita.

A13.9—Social-Necessity Value. Assuming the value of the dollar to be fixed, the amount mentioned might be regarded as some indication of the measure of social-necessity use, irrespective of the motor vehicle. However, as the greater part of construction expenditure was funded to be paid off over a protracted period, \$3.00 per head per annum is probably somewhat higher as a measure of the bare social-necessity equipment than would be the case under a municipal pay-as-you-go plan.

Table A13.8—Average Total Per Capita Expenditures for Construction and Maintenance on Urban Streets During Certain Five-Year Periods

City or Town	1905-9	1910-14	1915-19	Average
Toronto .....	...	...	\$4.87	...
Hamilton and London	\$2.20	\$4.09	2.82	\$3.04
London, Belleville, Stratford, Guelph and Kingston	2.60	2.95	2.45	2.67
Belleville, Stratford, Guelph, Kingston, Barrie and Lindsay	4.41	3.31	1.91	3.21

It is probable that the works represented by the costs as given for 1935-6, when both construction and maintenance expenditures were down to rock bottom, give a somewhat closer indication of bare social necessity, although they may be too curtailed as a basis for a general estimate. These expenditures are shown in Table A13.9.

Table A13.9—Average Annual Per Capita Expenditures on Urban Streets for 1935-36

City or Town	Construction	Maintenance	Total
Toronto	\$1.26	\$1.23	\$2.49
Hamilton and London	0.86	1.11	1.97
London, Belleville, Stratford, Guelph and Kingston	0.57	1.68	2.25
Belleville, Stratford, Guelph, Kingston, Barrie and Lindsay	0.37	1.14	1.51
Composite of nine urban municipalities	\$1.08	\$1.20	\$2.28

On the other hand, as will be seen from Table A13.5, the rural residents in six agricultural counties expended \$2.97 per capita on their roads in 1935. But the motor vehicle was a controlling factor in all road expenditures in 1935, though the conventional definition adopted for social necessity excludes the requirements of the motor vehicle as such.

For the twenty years from 1889 to 1908, inclusive, the townships spent on their rural roads an average of \$1.63 per year per head of rural population. It is quite probable that they obtained very poor results for the money expended, as \$0.87 of this expenditure was in the form of statute labour, for the most part rated at \$1.00 per day per man. But the uniformity of this expenditure, year after year, would seem to indicate that it represented the minimum essential expenditure necessary to keep the community functioning as such during these years.

Barrie is the only town for which complete statistics of road costs are available for any extended period prior to the use of the motor car. The average annual expenditure on its streets for the thirteen years from 1900 to 1912, when the first pavement was laid, was 65 cents.

London commenced its paving programme in 1900. In the eight years from 1900 to 1907, when the amount of paving was relatively very small, street maintenance costs averaged 89 cents per capita.

From the above it would appear that minimum social-necessity requirements for roads other than for motor vehicle use are greater in rural communities than in typical urban areas. To assume that social necessity bears equally on all residents of the Province would appear to be somewhat to the advantage of the rural general taxpayer in rural areas.

A13.10—Statistics of Expenditure on Urban Streets. As a means of affording a comparison of fairly recent expenditures on urban streets with the expenditures in pre-motor years given in Table A13.8, Table A13.10 is submitted.

Table A13.10—Average Annual Expenditures on Urban Streets in the Years 1915 to 1934, Inclusive

Group	Construction	Maintenance	Total
Toronto	\$5.25	\$1.95	\$7.10
Hamilton and London	2.77	1.66	4.43
Belleville, Kingston, Stratford, Guelph, Barrie and Lindsay	3.38	1.51	4.89
Stratford, Guelph, Barrie and Lindsay	3.55	1.13	4.68

The twenty years from 1915 to 1934 cover the period of the development of the motor vehicle in Ontario, and the expenditures indicated in the table give some idea of the excess of investment above minimum social-necessity demands required to be made in urban streets in order to keep pace with the increased use of them by motor vehicles.

Per capita expenditures of the nine urban municipalities for which information is available were as set out in Tables 12.5 and 12.6 of Chapt. XII.

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